THE MOCKINGBIRD MESA SURVEY

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and
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Bureau of Land Management
Colorado

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THE MOCKINGBIRD MESA SURVEY

SOUTHWESTERN COLORADO

By

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Bureau of Land Management

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FOREWORD

This volume represents the twenty-second Cultural Resources Series to be produced by Colorado. It is particularly significant because it represents one of the first "Class III," or total inventory, documents to be printed. Mockingbird Mesa is located in southwestern Colorado, an area which has one of the highest density of archaeological resources in the nation. Equally important is the fact that Mockingbird Mesa is the site of a major CO^2 field development. This inventory was conducted, in part, as a response to that gas field. The detailed analysis of Mockingbird Mesa has yielded valuable scientific information about the Anasazi culture along with data that has shed new light on other cultural values.

Perhaps the most important aspect of this publication is multiple use land management. Mockingbird Mesa, as noted, is in the middle of intense development. Yet the archaeology of the area has been totally iventoried and avoided in most circumstances. These values are actively being protected from vandalism and other destructive actions. This report provides needed data for land management decisions and it is an integral part of the recently completed Mockingbird Mesa Cultural Management Resource Plan.

I am pleased to offer this report to both the professional community and to the general public as part of the Bureau of Land Management's ongoing commitment to the preservation of important cultural values on the public lands.

Neil F. Morck
State Director, Colorado

ABSTRACT

A Class III survey was conducted on 3,976 acres of Mockingbird Mesa over the course of three years, 1981-1984. This report presents a synthesis of the data collected during these three years. A total of 684 sites were located on this survey. The majority of these sites dated to the Anasazi period and represented a wide range of site types, from multiple-household habitations to limited activity areas. In addition to the large number of Anasazi sites located, a small number of Archaic and Historic sites were located.

Data recovered from the Anasazi sites indicate that population levels fluctuated on the mesa during the Anasazi period. Populations were well-established during the Basketmaker III period, but then declined drastically during the subsequent Pueblo I period. Beginning in the Pueblo II period, population levels returned to and surpassed the Basketmaker III levels, and continued to increase until the end of the Pueblo III period, when the Anasazi population abruptly abandoned Mockingbird Mesa.

Recommendations are presented for the nomination of Mockingbird Mesa as a district to the National Register of Historic Places, and for protective measures to reduce or eliminate disturbances to cultural resources on Mockingbird Mesa.

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CHAPTER 1

INTRODUCTION

In August 1984, Woods Canyon Archaeological Consultants, Inc. was awarded a Bureau of Land Management contract (CO-910-CT4-004) to complete a Class III survey of Mockingbird Mesa, southwestern Colorado. The Class III survey area is composed of the 3,976 acres of land which constitute the top of Mockingbird Mesa. This mesa is located on public lands in the San Juan Resource Area of the Montrose District. Figure 1-1 presents the location of the study area in relation to regional physiographic and modern political boundaries, while Figure 1-2 presents the location of the project area in relation to local physiographic boundaries.

The Bureau of Land Management (BLM) is required to identify, evaluate, and protect prehistoric and historic cultural resources on public lands under its jurisdiction, and to ensure that Bureau-initiated or Bureau-authorized actions do not inadvertently harm or destroy non-federal cultural resources. These requirements are mandated by the Antiquities Act of 1906; the Reservoir Salvage Act of 1960, as amended by P. L. 93-291; the National Historic Preservation Act of 1966, as amended; the National Environmental Policy Act of 1969 (NEPA); Executive Order 11593 of 1971; and the Federal Land Policy and Management Act of 1976.

The Mockingbird Mesa study was developed to address the above statues. The objectives of the procurement were to 1) identify and evaluate the cultural resources located on Mockingbird Mesa 2) analyze the significance of the resources in a local and regional framework and analyze the cultural processes of settlement and land use and 3) suggest methods or means of long-term protection and management of the cultural resources on Mockingbird Mesa.

ACKNOWLEDGEMENTS

We would like to thank the many people who made the successful completion of this project possible. First we would like to thank those individuals who worked either in the field or in the laboratory on this project. These individuals are Sally Crum, Andy Darling, Lee Douthit, Deborah Hull, Bruce Ellis (who also drafted the maps in this report), Denise Evans, Donna Fesselmeyer, Steve Fuller, Mark Hovezak, Ed Huber, Bob Kriebel, Nancy Olsen, Ron Rood, Kim Robinson, Frank Rupp, Andrea Tucker, Laurie Webster, and Chris Zeller. Second we would like to thank those individuals who provided us with information and comments useful to this project. These individuals are Kristie Arrington, Dave Breternitz, Doug Dykeman, Steve Fuller, Barry Hibbets, Bill Lipe, Peggy Powers, Doug Scott, Marilyn Swift, Laurie Webster, Penny Whitten, and Max Witkind.

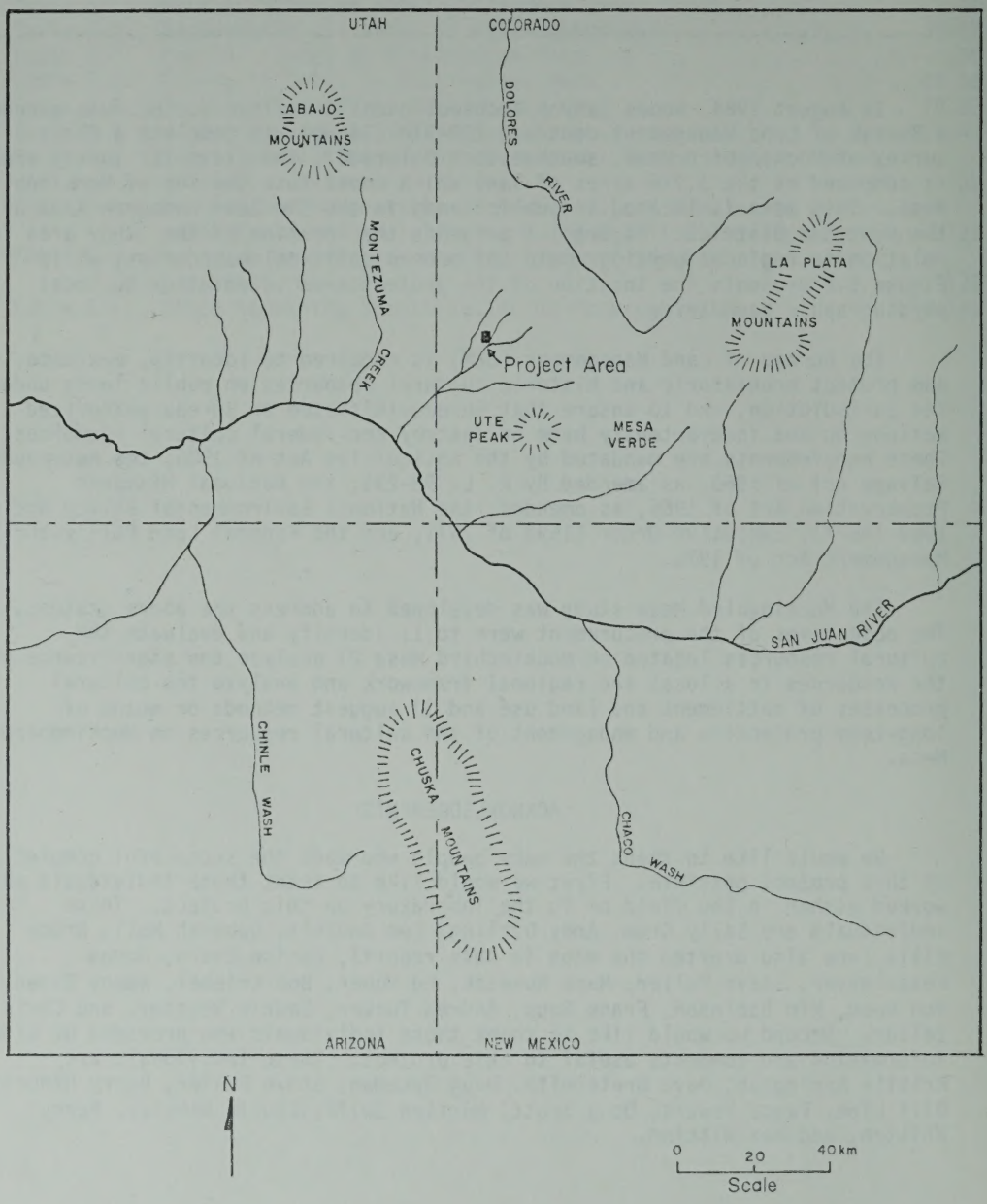

Figure 1-1. Map Showing Location of Project Area in Relation to Physiographic Features and Modern Political Boundaries in the Four Corners Region.

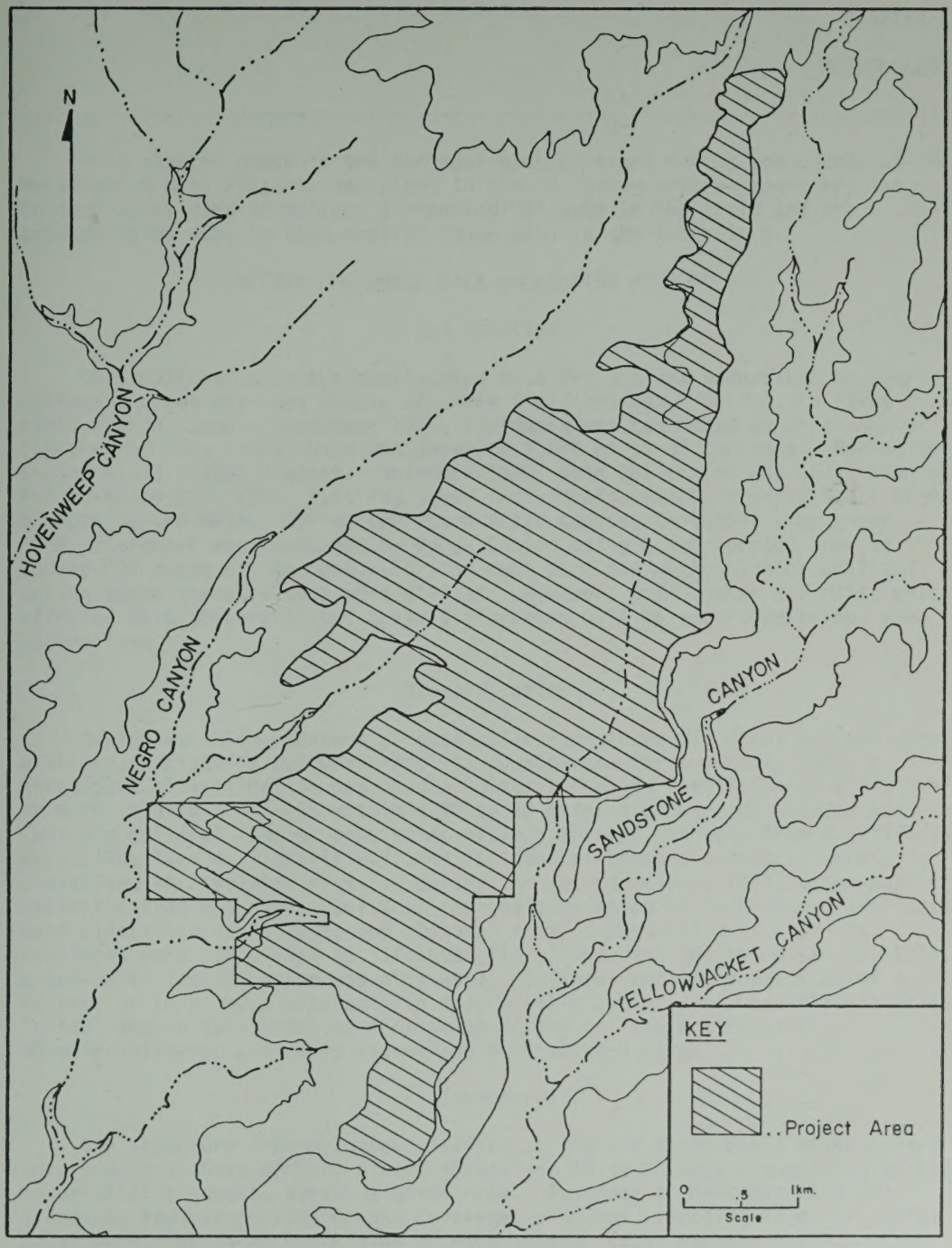

Figure 1-2. Map Showing Project Area in Relation to Local Physiographic Features.

CHAPTER 2

METHODOLOGY

This chapter presents the methodologies utilized during the course of the Mockingbird Mesa Project. Described in the following several pages are the methodologies used to collect archaeological data in the field and the methodologies used to then analyze these data in the laboratory.

CULTURAL RESOURCE DATA COLLECTION METHODOLOGY

Introduction

Data collection on the Mockingbird Mesa Project was undertaken by four different crews over the course of three field seasons. During the first field season, June - September 1981, fieldwork was conducted by an in-house BLM crew of four individuals who surveyed 1,260 acres of the mesa. During the second field season, August - November 1982, data collection was undertaken by two in-house BLM crews, totaling seven individuals, which surveyed 2,016 acres of Mockingbird Mesa. During the third field season, September - November 1984, fieldwork was conducted by Woods Canyon using a four-person crew to survey 700 acres of the mesa. For the most part the methodologies utilized during these three seasons were similar. However, differences did exist which affected data comparability; these differences will be addressed below, when appropriate.

Classification

During the three seasons of data collection three different methods were utilized to classify cultural remains. During the first season, 1981, a three-part classification was used. Cultural remains consisting of a feature or more than 26 artifacts within a 10 by 10 meter area were classified as "sites"; cultural remains consisting of less than 26 but more than 2 artifacts were classified as "localities"; and isolated diagnostic artifacts were classified as "isolated finds". During the second season, 1982, a two-part classification was used. Cultural remains consisting of more than 4 artifacts were classified as "sites", and cultural remains consisting of 4 or less artifacts were classified as "isolated finds". During the third season, 1984, a two-part classification was also used. Cultural remains consisting of a feature or 10 or more artifacts in a 30-meter-diameter area were classified as "sites" and cultural remains consisting of ten or less artifacts in a 30-meter-diameter area were classified as "isolated finds".

Inventory

The inventory methodologies utilized during the three field seasons were very similar. Crew members placed themselves 15 to 20 meters apart and walked in parallel transects across a given area. In order to maintain straight transects and ensure 100% ground coverage, pinflags, flagging tape, or toilet paper were used to mark one side of each sweep. Upon reaching the end of a transect, the crew pivoted around the marked side of the sweep, and surveyed back parallel to it. When a cultural resource was located during a sweep, the crew spread out and defined the extent of the resource. If the resource

represented a small site, a locality, or an isolated find, it would be recorded during the inventory phase. However, if the resource represented a large site, it would be flagged for easy relocation, plotted on field maps, and left for recordation during a "recording day".

Recordation

Each cultural resource located was recorded by plotting it on a map and filling out the appropriate forms. All resources were plotted on a U.S.G.S. Negro Canyon 7.5' quadrangle map; resources located during the 1984 season were also plotted on aerial photographs. Isolated finds and localities were recorded in fieldbooks and were later transferred onto Colorado Isolated Find forms, in the case of isolated finds, and Colorado Site Forms, in the case of localities. Sites were recorded on Colorado Site Forms during the 1982 and 1984 seasons and on an in-house BLM site form in 1981. All sites which had been recorded prior to the mid-1970's were rerecorded using Colorado Site Forms. When a previously recorded site could not be positively relocated, the Smithsonian number of that site was reassigned to the nearest unrecorded site in the vicinity.

Differences did exist between crews in the ways in which site size and function were interpreted during recordation. Because of the extremely high site density on Mockingbird Mesa, it is often difficult to determine where one site ends and where the next one begins. It is also difficult to know when to lump features together into one site and when to split features apart into several sites. It is evident from the data collected that there was much variability in this regard between the four field crews. It is also evident that there was variability within any one field season from beginning to end, with more splitting occurring during the first part of the season and more lumping occurring during the second part of the season. Site function was also interpreted somewhat differently between the various crews. Generally, all crews tended to perceive large habitations as being such, but crews differed more frequently in their interpretations of small sites. For example, one crew tended to assign a site type to the temporary habitation category while another crew tended to assign the same site type to the limited activity category.

Artifact Collection

The methodologies used for artifact collection differed drastically from season to season. During the first year, the sites were extensively sampled. A grid was laid out on each site and 4 by 4 meter units were collected from representative portions of the site. However, after calculating the time required to collect, wash, and analyze samples, the BLM decided to limit collections during the second field season. As a result, during the second year collections on sites varied from small judgment samples to large judgment and representative samples. In an effort to minimize collections, during the third season a primarily non-collection methodology was used. On large sites non-collection analysis transects were placed through representative portions of the sites; these were supplemented by non-collection analysis samples of judgment artifacts outside the transects. On small sites non-collection 100% artifact analysis was conducted. The third season was not totally non-collection, however, as several unusual projectile points were collected for curation.

CULTURAL RESOURCE DATA ANALYSIS METHODOLOGY

Introduction

Data analysis was undertaken in order to answer a number of questions about the archaeology of Mockingbird Mesa. To analyze the voluminous amounts of data, a computer and data base management program were utilized. The first step in data analysis was to compile the data from all three seasons and enter this information into the computer. The second step was to query the computer data base and then analyze the results.

Data Compilation

The first step in data compilation was to identify those data categories important to the analysis of the archaeology of Mockingbird Mesa. Nineteen such data categories were identified, and developed into a form as follows:

Site number
UTM
Soil (based on SCS maps of Mockingbird Mesa)
Specific landform
Distance to nearest spring
Site type
Time period
Vandalized?
Chained?
Need stabilization?
Pictographs/petroglyphs present?
Number of burned rock concentrations or upright slab features present
Number of pithouse or kiva depressions visible
Number of household units estimated
Temporary site number
Number of towers present
Eligibility to National Register of Historic Places
Excavated?

A form was filled out for each site or for each temporal component of a site, and the data was then entered into the data base management program.

The major sources of data for compilation were the site forms and site maps produced during the three field seasons. Two secondary sources were (1) collected artifactual materials and (2) in-field checks of recorded sites. A primary objective of data compilation was to achieve data comparability between the three seasons of fieldwork. To this end, the two authors of this report performed all data compilation and in-field site checks. They also conducted all analysis of projectile points and some analysis of ceramic materials. For the remainder of the ceramic analysis, they relied on the work performed in 1981-82 by Steve Fuller when he was area archaeologist for the Bureau of Land Management.

Two categories, Site Type and Time Period, describe the "heart" of the archaeology on Mockingbird Mesa and as such received special attention during the data compilation process. To describe the full range of the data, and to maximize data comparability, a hierarchical system was devised for these two categories. A brief explanation of this system follows.

SITE TYPE

For site types, the hierarchical system took as its first major subdivision a split between habitation sites and activity areas (or non-habitation sites). Under each of these two major headings, sites were assigned to the highest level of definition possible, given the information available. Figure 2-1 presents the hierarchical system developed for site types on the Mockingbird Mesa Project.

Habitation (H)

This classification was used for all sites which exhibited evidence of prolonged human occupancy.

Permanent: Multiple (HPM) and Single (HPS)

These sites contained evidence of architectural structures, sizeable middens, and, often, depressions. Habitations were further defined as multiple or single habitations based on their size. Single habitations were defined as those habitations which probably housed a single household, and multiple habitations were defined as those habitations which probably housed more than one household. Defining this based on surface indications was not all that cut-and-dried, but, based on excavations in the Four Corners Region, the following methodology was developed. Basketmaker III or Early Pueblo I sites containing a single locus of surface structures and a single midden were assumed to represent single habitations, while Basketmaker III or Early Pueblo I sites containing more than one locus of surface structures or more than one midden area were assumed to represent multiple habitations. Sites of the Late Pueblo I, Pueblo II, or Pueblo III period were classified as single habitations if they appeared to contain less than six surface rooms, only one midden area, and only one pithouse/kiva depression. Sites of the same time periods were classified as multiple habitations if they appeared to contain more than six surface rooms or more than one midden area or more than one pithouse/kiva depression.

Temporary: (HT) and Fieldhouse (HTF)

Assigned to this category were sites which contained evidence of architecture and a small midden. Two types of temporary habitations were defined on Mockingbird Mesa: those located on good agricultural soils and those located in rockshelters at the mesa's margins. In most instances the temporary habitations located on good soils were classified as fieldhouses (HTF) while those located in rockshelters or on poor soils were classified as temporary habitations, not further specified (HT).

Activity Area (A)

This classification was used for all sites which did not exhibit evidence of prolonged human occupancy.

Agricultural (AA)

On Mockingbird Mesa, two types of sites can be associated with agricultural activities: check dams (AAD) and field markers (AAM). Check dams

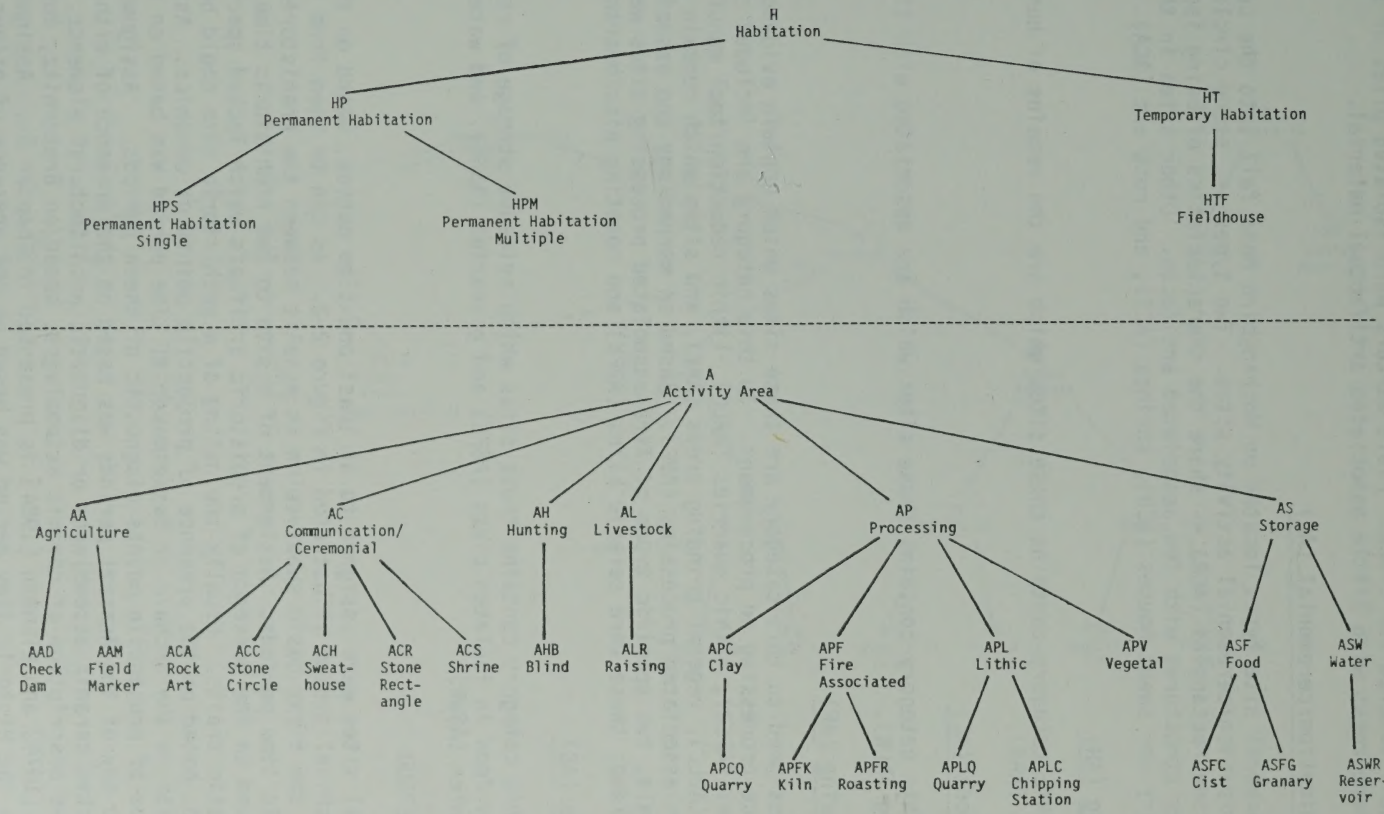

Figure 2-1. Diagram Illustrating Hierarchical System Used for Assigning Sites to Site Types.

were masonry walls placed across drainages to stop water runoff and provide an area well watered for crops. Field markers were isolated piles of small sandstone rocks with little associated artifactual material.

Communication/ceremonial (AC)

Several site types located on Mockingbird Mesa fall into the category of communication/ceremonial activity sites. Two types -- stone circles (ACC) and stone rectangles (ACR) -- share the characteristics of being isolated masonry structures with few associated artifacts. Other sites in this category are sweat-houses (ACH), shrines (ACS), and rock art (ACA).

Hunting (AH)

This category contains those sites which are the remains of hunting blinds (AHB).

Livestock (AL)

This category contains those sites which are associated with livestock raising (ALR).

Processing (AP)

Assigned to this category are those sites which contain evidence of resource processing or procurement. In this category are included clay quarries (APCQ), lithic quarries (APLQ), lithic reduction/tool manufacture areas (APLC), vegetal grinding areas (APV), and sites which contain evidence of fire-associated processing (APF). Based on morphology and associated materials, two specific types of fire-associated processing sites were recognized; these were ceramic kilns (APFK) and roasting pits/hearths (APFR).

Storage (AS)

This category contains those sites which evidence storage of resources, such as food in isolated cists (ASFC) and granaries (ASFG), and water in reservoirs (ASWR).

TIME PERIOD

All sites were assigned to at least one time period, based on the hierarchical system illustrated in Figure 2-2. As can be seen from this table, the first basic subdivision is a split between the Prehistoric and Historic time periods. Assignment of a site to the Prehistoric time period was based on the presence of prehistoric artifacts which lacked specifically diagnostic traits. Usually the dating of a prehistoric site could be further refined, based on the presence of projectile points or ceramics. Assignment of a site to the Archaic or Basketmaker II time period was based on the presence of projectile points diagnostic of these periods. Assignment of a site to any of the Anasazi periods was based on the presence of either diagnostic ceramic assemblages or diagnostic architectural elements. (A detailed description of ceramic assemblages, based on Breternitz, Rohn and Morris [1974] and Blinman [1984] is presented in Chapter 5.) Assignment of a site to the Historic time period was based on the presence of either historic artifacts or historic architecture. When data analysis revealed that a site

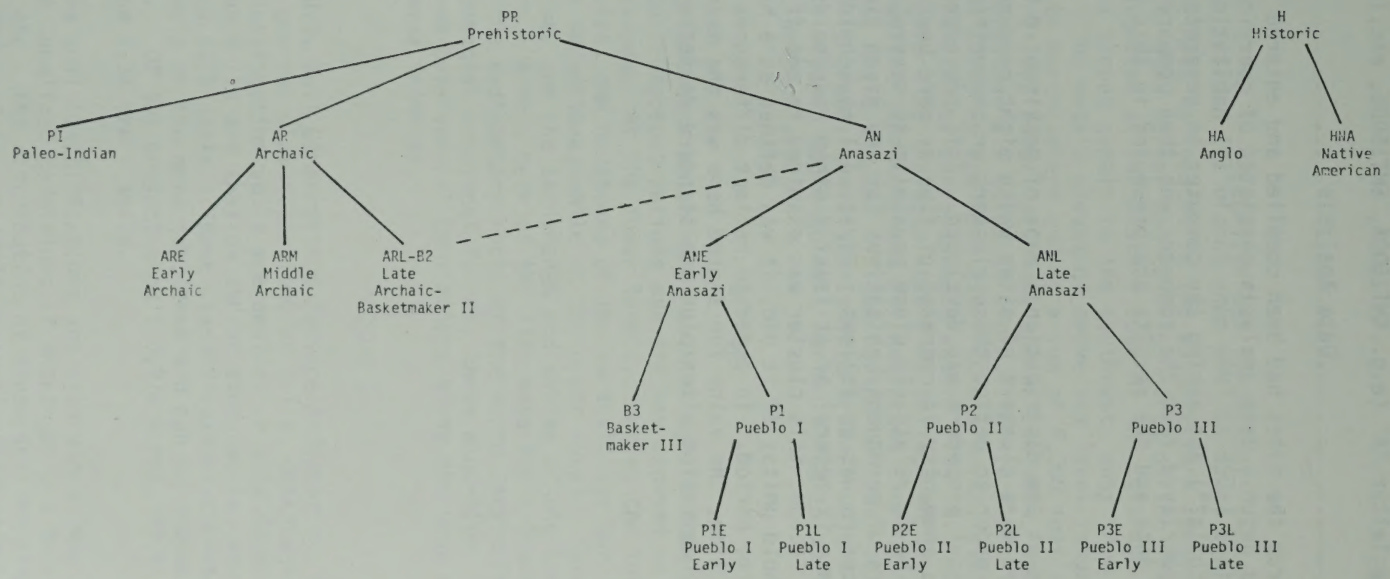

Figure 2-2. Diagram Illustrating Hierarchical System Used for Assigning Sites to Time Periods.

contained two (or more) temporal components, the components were identified by "tagging" the Smithsonian site number with successive letters of the alphabet, starting with the letter "A" (e.g. 5MT1500A, 5MT1500B, etc.).

Data Analysis

Once data from the sites had been compiled and entered into the computer, data analysis was begun. Data analysis consisted of querying the computer for "How many" questions (such as "How many Pueblo III habitations sites are located on M2CE soils?") and asking the computer to generate distributional maps. The data retrieved from the computer was then compared and contrasted to other sets of data and the results are presented in this report.

CLUSTER ANALYSIS

Upon looking at the distributional maps of Mockingbird Mesa, it was evident that there were clusters of sites which might represent prehistoric communities. In order to define these clusters or communities on an empirical basis a mathematical procedure was developed. This procedure was based on two assumptions: 1) a community is composed of five or more households and 2) each household should be in relatively close proximity to several other households. To define clusters of permanent habitations for any given time period, the mathematical procedure was as follows. First, all households situated within some short distance (X meters) of at least 2 other households were grouped into a cluster. Second, this cluster was examined to see if it contained at least five household units; if it did, it was defined as a habitation cluster for that given time period. In order to reflect differences in settlement patterns through time, the value for X used here was the mean distance between nearest neighbor habitation sites plus one standard deviation about that mean.

CHAPTER 3

ENVIRONMENTAL SETTING

LOCATION AND TOPOGRAPHY

Mockingbird Mesa is located in the southwestern corner of Colorado, 7 miles east of the Utah border and 28 miles north of the New Mexico border (see Figure 1-1). Situated at the eastern edge of the Colorado Plateau, Mockingbird Mesa slopes gently to the southwest, away from the uplifted San Juan Mountains. The mesa's elevation above sea level ranges from a high of 6,480 feet at its northeastern end to a low of 6,000 feet at its southwestern end. Mockingbird is a relatively long and narrow mesa, being 7.3 miles in length but no more than 1.6 miles in width. To its south is McElmo Creek and beyond that, the Sleeping Ute Mountain. To its north, east, and west are other mesas, separated by canyons whose waters flow into McElmo Creek. As can be seen from Figure 1-2, the mesa itself is defined on the east and south by the deep steep-walled Sandstone and Yellow Jacket canyons and on the west by the shallow broad Negro Canyon. To the north, no clear-cut definition of the mesa exists, as it grades continuously into broader upland mesas; here for the purposes of this report, Mockingbird's northern end is defined as the northern boundary of the project area.

GEOLOGY

The tilted sediments which comprise Mockingbird Mesa were formed during the Jurassic and Cretaceous periods and are now exposed on the mesa's highly-eroded slopes. At the lower levels, forming the talus slopes, are the sandstones, shales, and mudstones of the Jurassic-age Morrison and Junction Creek Sandstone formations, while at the upper levels, forming the rimrock and defining the mesa, are the sandstones and shales of the Cretaceous-age Burro Canyon Formation. Across much of the flat mesa top a Quaternary deposit of loess overlies the sedimentary rocks of the Burro Canyon Formation. As a result of differential erosional forces, these wind-blown loess deposits vary in thickness from only several centimeters along the mesa edge to several meters in the mesa interior.

SOILS

Based on U.S. Soil Conservation Service information, Mockingbird Mesa contains three general classifications of soils, designated by the letters R, M and V. R-classification soils are aeolian or wind deposited soils, M-classification soils are shallow and/or stony soils, and V-classification soils are valley fill soils. These classifications correspond to the soils found respectively on the mesa top, mesa and canyon slopes, and valley bottoms of Mockingbird. Of the project area's 3,976 acres, 49.4% are R soils, 49.3% are M soils, and 1.3% are V soils.

These three soil classifications are subdivided into smaller soil mapping units, based on localized conditions of Mockingbird's terrain, elevation, precipitation, etc. The distribution of these soil mapping units is illustrated in Figure 3-1. In addition to classifying soil types these soil

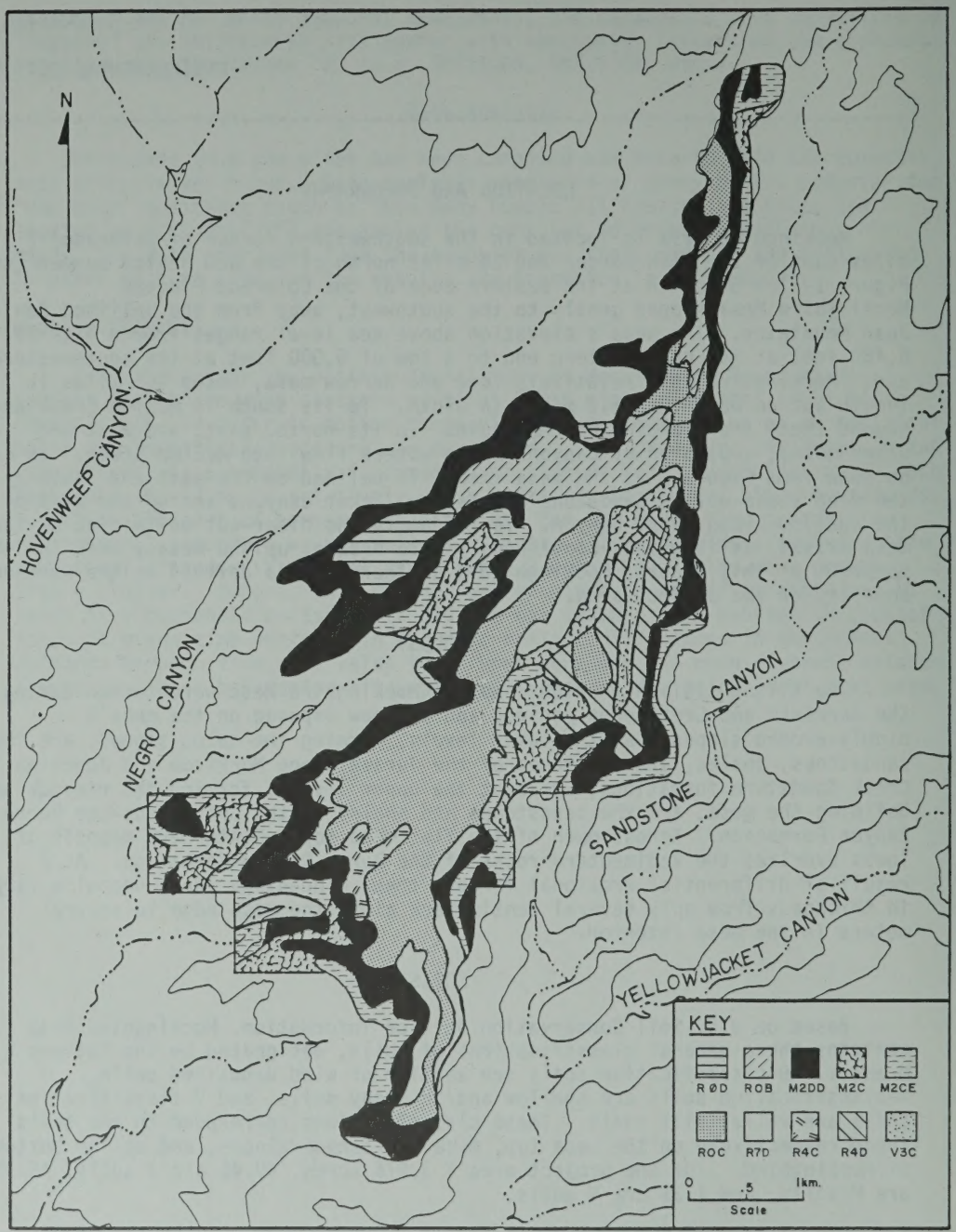

Figure 3-1. Map Illustrating the Distribution of Soil Mapping Units on Mockingbird Mesa.

mapping units serve as good proxies for topographic landform. Since these units are used elsewhere in this report for the purposes of examining settlement patterns, they will be described here in some detail. All soil descriptions are paraphrased from Soil Conservation Service descriptions.

R-Classification Soils

The R-classification soils are formed in Quaternary loess deposits. On Mockingbird Mesa R soils are represented by six soil mapping units: ROB, ROC, ROD, R4C, R4D, and R7D. Of the project area's 3,976 acres, they constitute the following:

Soil Mapping Unit	Acres	Percent
ROB	266.7	6.7
ROC	1002.8	25.2
ROD	126.7	3.2
R4C	86.7	2.2
R4D	186.7	4.7
R7D	293.4	7.4
All R Soils	1963.0	49.4

The soil mapping units which contain the thickest deposits of loess are designated by the letters "RO". Composed of Witt loam, they are all deep, well-drained soils which occur on mesa tops and uplands, and in the case of ROD, also on hillsides. An example of a ROC soil mapping unit is illustrated in Figure 3-2. The chief difference between the three RO soils is the percent slope on which they are found. ROB soils occur on 1 to 3 percent slopes, ROC soils occur on 3 to 6 percent slopes and ROD soils occur on 6 to 12 percent slopes. Each increase in percent slope results in an increase in water runoff and water erosion hazards.

The soil mapping units which contain moderately thick deposits of loess are designated by the letters "R4" and "R7". Occurring on uplands, mesatops, and hillsides, R4 and R7 soils contain not only Witt loam, but also Cahona, Bowdish, and Pulpit loams. Rock outcrops are occasionally present in these soil mapping units. R4C soils occur on 3 to 6 percent slopes, R4D soils occur on 6 to 10 percent slopes, and R7D soils occur on 6 to 10 percent slopes. Compared to the RO soils, the R4-R7 soils are shallower, occur more frequently on slopes greater than 6 percent, have less effective rooting depth, more rapid water runoff, and consequently higher water erosion hazard.

All R-classification soils are suitable for agricultural purposes. In viewing the entire spectrum of R-classification soils, however, it can be seen that from an agricultural point of view, the ROB soils are the most desirable and the R7D soils are the least desirable.

Figure 3-2. Photograph Illustrating ROC Soil Mapping Unit. Sleeping Ute Mountain in Background.

M-Classification Soils

The M-classifications soils are characterized as shallow and/or stony soils. In general these soils are located in areas where the Quaternary loess deposits have been entirely or mostly eroded away. On Mockingbird Mesa, M soils are represented by three soil mapping units: M2DD, M2C, and M2CE. Of the project area's 3,976 acres, they constitute the following:

Soil Mapping Unit	Acres	Percent
M2DD	1041.5	26.2
M2C	429.4	10.8
M2CE	488.3	12.3
All M Soils	1959.2	49.3

M2DD soils occur on 3 to 12 percent slopes, on edges of mesa tops, moderately dissected and rolling uplands, and hillsides. These soils are composed primarily of Gladel and Pulpit loams, derived from colluvial and aeolian materials, with a small percentage of rock outcrop also being present. Water runoff is medium to rapid, and the hazard of water erosion is moderate to high.

M2C and M2CE soils occur on canyon sideslopes, hillsides, and benches on slopes of 12 to 25 percent (M2C) and 25 to 80 percent (M2CE). These soils are composed primarily of stony loams with sandstone rock outcrops occasionally being present. Water runoff is rapid, and the hazard of water erosion is high. An example of a M2CE soil mapping unit is illustrated in Figure 3-3.

Unlike the R-class soils, the M-class soils are unsuitable for agricultural crop production. While they do have a limited potential for pasture and grazing, they are best suited to uses as woodland and wildlife habitat.

V-Classification Soils

V-classification soils are valley fill soils. On Mockingbird Mesa this classification is represented by only one soil mapping unit, V3C, which is illustrated in Figure 3-4. Of the 3,976 acres in the project area, this soil mapping unit constitutes the following:

Soil Mapping Unit	Acres	Percent
V3C	53.3	1.3

V3C soils occur on 3 to 12 percent slopes on alluvial fans and terraces. These soils are composed of fine sandy loams, deep and well-drained, which are formed in alluvium derived dominantly from sandstone and shale. Water runoff is medium, and the hazard of water erosion is moderate. These soils are well-suited to agricultural crop production, although they do have a tendency towards high salinity.

Figure 3-3. Photograph Illustrating M2CE Soil Mapping Unit.

Figure 3-4. Photograph Illustrating V3C Soil Mapping Unit.

CLIMATE

Temperature*

The average annual air temperature on Mockingbird Mesa is 49 degrees Fahrenheit. Winters are cool, with an average temperature of 29 degrees and an average daily minimum temperature of 16 degrees. Summers are hot with an average temperature of 69 degrees and an average daily maximum temperature of 85 degrees. Extremes in temperature range from wintertime lows of -27 to summertime highs of 101 degrees Fahrenheit. The average frost-free period lasts between 100 and 135 days.

Precipitation* and Water Sources

Mockingbird Mesa receives approximately 13.5 inches of precipitation each year. About 40% of this falls as snow during the late fall, winter and early spring months. Precipitation then tapers off through the spring until a dry period is usually reached which prevails from late May to early July. Beginning in July, convective thunderstorms mark the arrival of the summer and fall rains. About 40% of the annual precipitation comes from these rains, which last through October. While these weather patterns generally hold true, wide monthly and yearly deviations are common, so that precipitation may vary considerably between one season and the next.

Groundwater sources on Mockingbird Mesa are relatively few and far between. Due to the limited amount and irregular distribution of precipitation, and due to the absence of any mountain-fed streams, Mockingbird Mesa possesses no truly permanent sources of water. It does possess, however, a number of springs which currently flow year-round. The dependability of these springs is related to groundwater recharging, which in turn is related to the amount of precipitation received over the preceding several years. At the present time, at least 10 springs are known to exist on Mockingbird Mesa. These springs occur along the mesa edge at the interface of the sandstone rimrock with the underlying shale. Based on paleoclimatic data (Peterson 1985) it is probable that most of these springs also flowed during prehistoric times.

Surface water sources on Mockingbird Mesa are intermittent in nature. For brief periods following rainstorms or snowmelt, many drainages on Mockingbird Mesa become sources of surface water. Although these drainages dry up quickly, water may occasionally remain in small pools and potholes along the drainages.

VEGETATION

Mockingbird Mesa is covered with a vegetative community composed primarily of pinyon, juniper, sagebrush, and grass. While the distribution of these plants is fairly uniform across the mesa, the proportions of these plants varies from area to area on the mesa. This variation is primarily a reflection of three factors: (1) chaining, (2) water, and (3) elevation.

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*Interpolated from data provided by the US Soil Conservation Service and the National Climatic Center

Approximately 2,040 acres (51%) in the project area have been chained; in these areas, the vegetative community is dominated by grasses mixed with big sagebrush or black sage. Western wheatgrass and muttongrass are the most common, with junegrass, needle-and-thread, Indian ricegrass, and bottlebrush squirreltail also present. In addition to sage, other tall shrubs and woody plants are occasionally present, including antelope bitterbrush, Utah serviceberry, true mountain mahogany, Douglas rabbitbrush, and cliffrose. Small flowering plants such as lupine, paintbrush, phlox and datil yucca also grow in these open areas. In all chained areas, pinyon and juniper have become re-established, but the trees, being relatively young, are usually less than 4 feet in height.

The unchained portions of the project area, approximately 1,936 acres or 49%, are covered with a mature pinyon and juniper forest. In these areas, the pinyon and juniper trees dominate the vegetative community and consequently the associated understory is relatively sparse. Muttongrass, indian rice grass, cedar weed, sage, and yucca grow widely spaced between the trunks of the pinyon and juniper trees.

Due to the increased availability of water, the vegetation around Mockingbird's springs grows more abundantly than elsewhere on the mesa. Thick stands of tall sagebrush and grasses often mark the locations of these springs. In addition to the pinyon-juniper vegetation discussed above, several types of riparian vegetation grow in the vicinity of the springs; these are cottonwood trees, tamarisk, sedges, cattails, and ferns.

Elevation on Mockingbird Mesa relates directly to the density and composition of pinyon-juniper communities on the mesa. Due to increased evapotransporation rates the southern end of the mesa supports a sparser pinyon-juniper forest than does the northern end of the mesa. Juniper, having a greater elevational range in the area than pinyon (Litzinger 1976) is present in higher frequencies in the southern forests than in the northern forests.

FAUNA

The vegetation and terrain of Mockingbird Mesa support a variety of species of mammals, birds, and reptiles. In general Mockingbird is inhabited by small mammals such as the desert cottontail, black-tailed jackrabbit, woodrat, coyote, bobcat, grey fox, weasel, least chipmunk, rock squirrel, spotted skunk, and porcupine. Two types of large mammals utilize the mesa; they are the mule deer and the mountain lion. In addition to the mammals which inhabit Mockingbird, many kinds of birds and reptiles also live on the mesa. Birds include the red-tailed hawk, common raven, short-eared owl, canyon wren, rufous-sided towhee, junco, white-breasted nuthatch, and of course, the mockingbird. Reptiles include the western diamond-backed rattlesnake, garter snake, collared lizard, and horned toad.

PALEOENVIRONMENT

Plant and animal remains recovered from excavated Anasazi sites on Mockingbird Mesa and elsewhere in the Four Corners Region indicate that the environment of this area during the period AD 450 - 1300 was generally similar to the present-day environment. It appears that during this period fluctuations in temperature and precipitation did occur which probably had an effect on the prehistoric Anasazi inhabitants (Peterson 1985).

CHAPTER 4

CULTURAL OVERVIEW

INTRODUCTION

This chapter presents a brief overview of the cultures known to have been present in the vicinity of Mockingbird Mesa and their utilization of the Four Corners Region. For broadly descriptive purposes, the human occupation of the Four Corners Region has been divided into five temporal/cultural subdivisions. These five subdivisions are: Paleo Indian (ca. 10,000 BC - 5,500 BC), Archaic (ca. 5,500 BC - 500 AD), Anasazi (ca. 1 AD - 1300 AD), Late Prehistoric/Protohistoric (ca. 1300 AD - 1761 AD), and Historic (ca. 1761 AD - 1935). The following discussion presents an overview of these five periods. The dates and subdivisions used here are based on archaeological findings from the entire Four Corners Region and they therefore do not correspond exactly with the dates and subdivisions used specifically for Mockingbird Mesa throughout the rest of this report. It should be noted that for each period, only the most widely-shared cultural traits are described and therefore the cultural variability which existed within each period tends to be obscured.

PALEO-INDIAN: ca. 10,000 BC - 5,500 BC

The Paleo-Indian period is the earliest period for which we have evidence of human occupation in the Four Corners Region. The Paleo-Indian people probably lived in small nomadic bands and engaged in seasonal hunting and gathering activities. Evidence recovered from sites outside the Four Corners Region suggests that the Paleo-Indians hunted now-extinct species of Pleistocene fauna, such as mammoth, bison, camel, and horse, and species of present-day fauna, such as moose, wolf, and rabbit (Wheat 1978; Johnson 1974). In addition to hunting, the Paleo-Indian people collected seasonally available wild plant foods such as hackberry and elderberry (Johnson 1978; Wendorf 1961).

Within the Four Corners Region, little is known about the exact time or nature of this earliest occupation, owing to the fact that no Paleo-Indian sites have been excavated in the region. Our only evidence for the Paleo-Indian occupation of the Four Corners Region consists of surface finds of diagnostic Paleo-Indian projectile points. The low number and sparse distribution of these projectile points suggests that the Four Corners Region was infrequently utilized by small groups of people during this time period.

ARCHAIC: ca. 5,500 BC - AD 500

The lifestyle of the Archaic people in the Four Corners Region was based on the utilization of a wide variety of plant and animal resources. The Archaic people probably lived in small family groups and pursued seasonal rounds of hunting and gathering locally-available animal and plant resources. Bison, mule deer, rabbit, gopher, cactus, pickleweed, and saltbrush were all included in the Archaic diet (Jennings 1978). By the late Archaic period, people supplemented their diet with two domesticated plants, corn (Simmons 1981) and squash (Lawrence and Muceus 1981).

The material culture of the Archaic peoples reflected the inventive utilization of the resources locally available to them. A variety of plant and animal parts were used for the manufacture of tools, clothing, and ornaments. These items included baskets, snares, awls, nets, sandals, blankets, moccasins, cradles, gaming pieces, pendants, and beads. A variety of lithic materials were used for the manufacture of stone tools. These stone tools included well-made dart points, scrapers, knives, manos, and metates. Evidence recovered from outside the Four Corners Region indicates that, in addition to living in caves, Archaic people also lived in shallow pithouses in open countryside (McGuire 1984).

Evidence for the Archaic occupation of the Four Corners Region consists of several dozen firmly-dated, excavated sites and several hundred tentatively-dated, unexcavated sites. Our best information concerning this occupation comes from excavated sand dune sites in the San Juan Basin, New Mexico (Simmons 1981) and from cave deposits in south and central Utah (Lindsay et al. 1968; Jennings 1980).

ANASAZI: ca. AD 1 - 1300

During the early part of the Anasazi period, the lifestyle of the people in the Four Corners Region gradually began to change. This change involved a shift from a nomadic hunting and gathering lifestyle to a sedentary agricultural lifestyle. This transition may well have been the result of both the evolution of local cultures and the diffusion of new ideas and technologies into the region from other areas. During the Anasazi period, populations increased markedly throughout the Four Corners Region.

The Anasazi culture began to develop around AD 1 and flourished in the Four Corners Region until approximately AD 1300. In general the Anasazi maintained a high degree of communication among themselves, which resulted in a remarkable degree of cultural homogeneity throughout the region. During the Anasazi period the culture evolved from a relatively simple, loosely organized society into a fairly complex, highly organized society. This evolution was reflected in changes in architecture, settlement patterns, and artifact assemblages.

These changes are the basis for an archaeological classificatory scheme known as the Pecos Classification (Kidder 1927). The Pecos Classification divides the time of Anasazi occupation of the Four Corners Region into five temporal/cultural periods: Basketmaker II (ca. AD 1 - 450), Basketmaker III (ca. AD 450 - 725), Pueblo I (ca. AD 725 - 900), Pueblo II (ca. AD 900 - 1100), and Pueblo III (ca. AD 1100 - 1300).

Basketmaker II: ca. AD 1 - 450

The Basketmaker II period marks the recognizable beginnings of the Anasazi culture. In many respects the Basketmaker II lifestyle was similar to the late Archaic lifestyle, in that it was semi-nomadic and semi-sedentary. The diet of the Basketmaker II people consisted primarily of hunted and gathered foods supplemented by cultivated crops. The people lived in caves and in open sites in shallow pithouses (Morris and Burgh 1954; Matson 1983). Pithouses were circular in shape and composed of logs laid horizontally in adobe. The material culture of the Basketmaker II people included rabbit fur

blankets, coiled basketry, yucca twine nets and snares, corner-notched projectile points, trough-type metates, and two-hand manos. Items of non-local origin, such as Olivella shell from California, demonstrate the Basketmaker II people participated in far-reaching exchange systems. A number of loci of Basketmaker II settlements have been identified in the Four Corners Region; these include the La Plata-Animas-Los Pinos drainages in southern Colorado and northern New Mexico (Fetterman and Honeycutt 1982; Eddy 1966); Cedar Mesa in southeast Utah (Lipe and Matson 1971); several caves along the Utah-Arizona border (Jennings 1978); and Black Mesa in northeast Arizona (Klessert 1983).

Basketmaker III: ca. AD 450 - 725

Between AD 450 and 725 the Anasazi completed the transition from a semi-nomadic hunting and gathering society into a sedentary agricultural society. This change was reflected in the increased size and complexity of household architecture, the building of community structures, the cultivation of beans in addition to corn and squash, and the widespread manufacture and use of pottery. During this period, people lived in semi-subterranean pithouses and utilized surface structures primarily for the storage of surplus crops. The material culture of these people included plain grayware and painted ceramic vessels, trough-type metates, two-hand manos, turkey feather blankets, and the bow and arrow. In general, settlement during the Basketmaker III period was dispersed in nature, although in several locations dwellings were clustered into large villages (Roberts 1929; D. Breternitz, personal communication). Within the Four Corners Region during this time, some local population increases occurred. This is evidenced by the large number of Basketmaker III sites in areas such as the McElmo Creek and Dolores River drainages in southwestern Colorado, Chaco Canyon in northwestern New Mexico, and Alkali Ridge in southeastern Utah. This population increase did not apparently occur throughout the entire Four Corners Region however. In areas such as Cedar Mesa, Black Mesa, the San Juan Basin, and the Los Pinos River and upper San Juan River drainages, relatively few Basketmaker III sites have been found.

Pueblo I: ca. AD 725 - 900

Pueblo I was a time of population aggregation and movement throughout the Four Corners Region. In contrast to sites of the Basketmaker III period, sites of the Pueblo I period were often large and contained multiple pithouses and arcs of contiguous surface rooms. These surface rooms were used by Pueblo I people for food processing and storage and for some domiciliary activities. Population migrations to higher terrain and to well-watered drainages occurred during the late Pueblo I period. These migrations have been attributed to climatic changes that occurred during this time (Peterson 1983). Areas in the Four Corners Region which supported large late Pueblo I populations were Chippean-Milk Ranch point, Utah (Louthan 1977), the Cahone-Dolores-Hartman drainage systems, Colorado (Fetterman and Honeycutt 1982; Kane 1983), the higher elevations of Mesa Verde, Colorado (J. Smith personal communication), and the upper San Juan River Basin in Colorado and New Mexico (Eddy 1966). Areas in the Four Corners Region which supported few or no late Pueblo I populations include Cedar Mesa (Haase 1983) and Alkali Ridge (Brew 1946) in Utah, and western Montezuma County (Honeycutt and Fetterman 1982) and the Animas River Valley (Gooding 1980) in Colorado.

Pueblo II: ca. AD 900 - 1100

The Pueblo II time period was one of continued sedentary agriculturalism for the Anasazi people. This was reflected in the continued used of cultigens, the implementation of agricultural water control practices, and the construction of substantial masonry dwellings which contained specialized corn grinding and storage rooms. At the same time, this period was also one of change in terms of intrasite functioning and in terms of the distribution of populations at the local and regional levels. At the intrasite level, the subterranean structure formerly used as a dwelling in Pueblo I apparently assumed a new, ceremonial function in Pueblo II. At the local level many of the aggregated communities developed during Pueblo I dispersed, and instead small, loosely clustered habitations were built on mesatops and in valleys. At the regional level, populations shifted down from the higher elevations occupied during Pueblo I to lower elevations, and marginal environments were increasingly utilized during this period (Chandler et al 1980). While throughout much of the Four Corners Region Pueblo II was a time of population expansion, in at least one area, the Piedra River drainage, it was a time of population contraction (Eddy 1966: 505).

Pueblo III: ca. AD 1100 - 1300

The Pueblo III time period was a period of cultural flourescence in the Four Corners Region. Architectural and ceramic technologies of this time period were highly refined, and ceramic exchange systems flourished in many areas of the Four Corners Region. During this period, some people continued to live in small unit pueblos, but many others aggregated together into large, well-made masonry villages and towns. Many of these larger settlements were located at the heads of canyons near permanent sources of water. In at least one area, Chaco Canyon, complex systems of roads linked villages and towns together. In spite of all this, however, by the early AD 1300's the entire Four Corners Region had been abandoned by the Anasazi.

LATE PREHISTORIC/PROTOHISTORIC: ca. AD 1300 - 1761

Sometime during the 461 years between AD 1300 and 1761, two new culture groups appeared in the Four Corners Region. These cultures were not sedentary ones with economies based on agriculture, but rather nomadic and semi-nomadic ones with economies based on hunting, gathering, and limited agriculture. At the present time virtually nothing is known about the exact time or nature of their appearance in the Four Corners Region, due to the paucity of non-Anasazi archaeological remains which date between 1300 and 1761. It is known, however, that these two cultures were the foundation of the two Native American Indian tribes known today as the Ute and the Navajo.

Ute

The Utes, who occupied most of the Four Corners Region north of the San Juan River, practiced a fairly mobile lifestyle based on seasonal rounds of hunting and gathering (Jennings 1978:235). They lived in caves, brush-covered shelters or wickiups, and less commonly, domed willow houses and skin-covered tipis (Wormington and Lister 1956). The Utes ate a variety of hunted foods, such as bison, deer, mountain sheep, bear, rabbit, and reptile, and a variety of gathered foods, such as pinyon nuts, acorns, sunflowers, grass seeds, cactus, roots, and tubers (Stewart 1942). Historically, and perhaps

prehistorically, the Utes cultivated corn, pumpkin, and squash.

Items of Ute material culture included micaceous pottery, Desert side-notched projectile points, one-hand manos and slab milling stones, baskets, skin containers, bone ornaments, juniper bark mats, and deer skin clothing (Buckles 1968). As a result of historic contact with Euroamericans, metal products and horses were introduced into the Ute material culture. The introduction of the horse in particular played a major role in reshaping Ute culture during the AD 1700 and 1800's. The Utes occupied much of southeastern Utah and southwestern Colorado until the late 1800's, when as a result of Euroamerican pressures, they moved onto their present-day reservations.

Navajo

The Navajos drifted south and west into what is now northern New Mexico sometime before AD 1600. Prehistorically, the Navajo practiced a mixed economy of hunting, gathering, and maize agriculture. They lived primarily in forked-stick hogans, but in some defended areas, also in masonry structures. They wove baskets and blankets, manufactured several varieties of pottery, and used slab metates, two-hand manos, bone awls, and a variety of other stone and bone tools. With the arrival of the Spanish in the southwest in the late 1500's, the Navajo added sheep, horses, metal tools, and glass trade items to their material culture.

The Navajo occupied much of northwest New Mexico and parts of southwest Colorado until the late 1700's. At this time they were driven from these areas by raiding Utes and Commanches onto lands which are now their reservation.

HISTORIC: AD 1761 - 1935

The Historic period in the Four Corners Region was marked by the arrival of a Spanish expedition in the area in 1761. This expedition, led by Juan de Rivera, was for the purpose of exploring the region. Several more expeditions through the region were undertaken by the Spanish during the next two decades. After these explorations, this area was generally not visited by Euroamericans until the early 1800's when trappers traversed the area in search of beaver and traders passed through the area following the Old Spanish Trail to Los Angeles (Pierson 1981:78).

After the 1848 war with Mexico, the Four Corners Region became the possession of the United States. This newly acquired territory was the focus of several expeditions, initiated by both the U. S. federal government and the Mormon Church, to inventory and evaluate the land. The findings of these expeditions generally discouraged permanent settlement and construction of transportation routes through the region, due to the ruggedness of the terrain.

Between the 1860's and 1880's, discovery of gold and other precious minerals brought prospectors to the Colorado Mountains and the tributaries of the San Juan in New Mexico and Arizona. These prospectors were soon followed by farmers and ranchers; the San Juan River valley was settled by members of the Mormon Church and the range lands of the Northern San Juan Area were used by ranchers for grazing cattle.

This Angloamerican settlement and use of the region had a negative effect on the indigenous populations of the area. The end result of the conflicts between the indigenous and Angloamerican populations was that much of the Four Corners Region was taken from the native populations and opened up for homesteading to the Angloamerican populations.

In the late 1800's, the fall of precious metal prices led to a decline of the mining industry in the mountains, while at the same time the effects of overgrazing led to a decline of the cattle industry across large areas of open range. However, the arrival of the railroads and the construction of irrigation systems stimulated production in other locations in industries such as agriculture, fruit growing, livestock raising, and lumbering.

During the early 1900's, the mining of non-precious metals, the production of oil, and the development of tourism created new sources of income for the Four Corners Region. These, combined with farming, livestock raising, and lumbering have become the basis for the region's present-day economy.

CHAPTER 5

RESULTS OF SURVEY

INTRODUCTION

The Class III survey of Mockingbird Mesa located 684 archaeological sites representing 7,000 years of human occupation and a full range of human activities. These sites literally covered the mesa, as can be seen from Figure 5-1. Clearly, Mockingbird Mesa contains a large and diverse assemblage of archaeological resources. This chapter presents a discussion of these resources, and the human activities which they represent, based on the data obtained from the Class III survey. Site-specific data is presented in tabular form in Appendix 1.

This chapter is divided into three sections. The first section, Synchronic Analysis, examines the data by time period. The second section examines the data in relation to Site Type. The third section, Diachronic Analysis, examines the data through time.

SYNCHRONIC ANALYSIS

The 684 archaeological sites located on Mockingbird Mesa dated to four periods: the Prehistoric, the Archaic, the Anasazi, and the Historic. A total of 834 temporal components were identified; of these, 106 dated to the Prehistoric, 18 dated to the Archaic, 700 dated to the Anasazi, and 10 dated to the Historic.

This section discusses the data recovered from the Archaic, Anasazi, and Historic sites. For each period four topics are addressed; these topics are (1) dating techniques used to assign sites to that time period; (2) surface manifestations of those sites; (3) results of any excavations of those sites; and (4) regional comparisons. Data from sites assigned to the general prehistoric period (i.e., data from sites which could not be assigned to a specific prehistoric period) are not discussed in this section due to the low degree of temporal resolution; these data are discussed in the following section under specific site types.

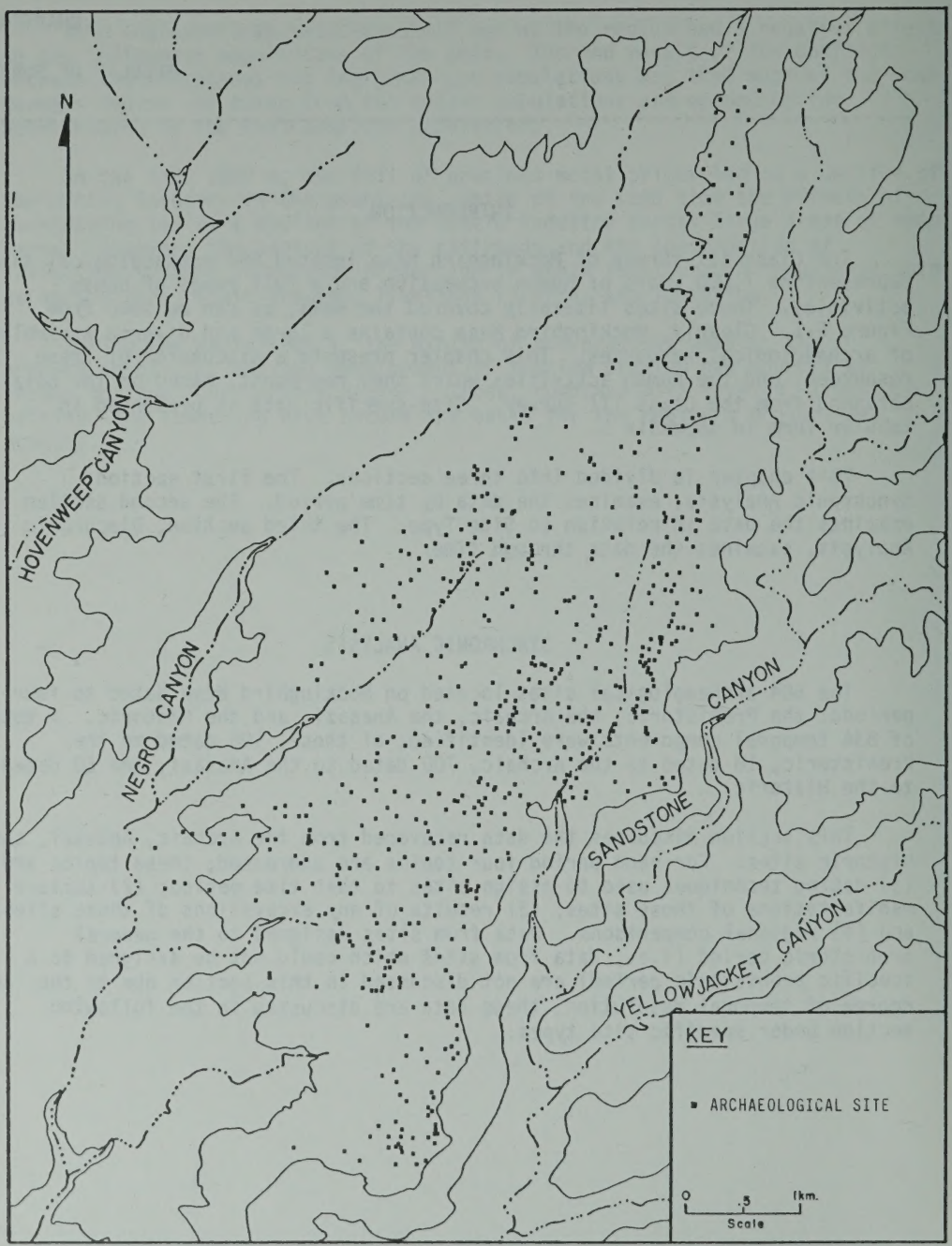

Figure 5-1. Map Illustrating the Distribution of Archaeological Sites on Mockingbird Mesa.

Archaic: 5,500 BC - 450 AD

SURVEY DATA

Introduction

The presence of an Archaic population on Mockingbird Mesa is well-documented by the survey data. Eighteen Archaic temporal components were identified on the mesa; one dated to the Early Archaic time period (5500 - 3200 B.C.), 13 dated to the Middle Archaic time period (3200 - 800 B.C.) and four dated to the Late Archaic-Basketmaker II time period (800 B.C. - 450 A.D.). (For the purposes of this report the Basketmaker II time period was combined with the Late Archaic time period.) Table 5-1 presents information on the 18 Archaic temporal components found on Mockingbird Mesa.

Dating

The presence of diagnostically-shaped projectile points was the basis for dating 17 of the 18 Archaic temporal components on Mockingbird Mesa. Figure 5-2 illustrates the projectile points thought to date to the Early and Middle Archaic time periods and Figure 5-3 illustrates the projectile points thought to date to the Late Archaic-Basketmaker II time period.

In the absence of diagnostically-shaped projectile points, one site was dated to the Archaic period on the basis of architecture and associated artifactual material. This assignment was based on the presence of a circular upright slab cist or structure in association with a lithic scatter. Based on these remains the site was dated to the Late Archaic-Basketmaker II time period.

Several sites which contained Archaic-style projectile points were not classified as Archaic sites. The composition of these sites, Anasazi permanent habitations, suggested that the points did not represent underlying Archaic components but rather the prehistoric collection of Archaic points by Anasazi people. Therefore, it was thought inappropriate to classify these sites as having Archaic temporal components.

Surface Manifestations

The 18 Archaic temporal components exhibited a range of complexity as to their surface manifestations. The smallest and least complex Archaic site was a tiny chipping locus which contained a single diagnostic projectile point. In contrast, the most complex Archaic sites were composed of extensive lithic scatters containing hundreds of pieces of flaked lithic debris, dozens of flaked lithic and ground stone tools, and several burned rock or upright slab features. Between these extremes were sites which contained varying combinations of lithic tools and features.

Most of the Archaic materials were interpreted as representing the remains of limited activity areas or perhaps campsites. Of the activities represented, flintknapping was the most common, followed by fire-building, and lastly vegetal food grinding. On one site cultural materials were interpreted as representing the remains of a temporary habitation.

Table 5-1. Archaic Sites on Mockingbird Mesa.

Site Number	Site Type	Period	Soil	Distance to Spring in Meters
5MT1515A	Processing, lithics	Early Archaic	M2CE	500
5MT1533A	Temporary habitation?	Late Archaic - Basketmaker II	ROC	450
5MT3031	Processing, lithics	Middle Archaic	M2DD	375
5MT3035	Processing, lithics	Middle Archaic	M2CE	300
5MT3061	Processing, lithics	Middle Archaic	M2C	850
5MT3076	Processing, fire assoc.	Middle Archaic	M2C	325
5MT3090A	Processing, fire assoc. and lithics	Middle Archaic	M2CE	50
5MT3099	Processing, lithics	Middle Archaic	M2CE	150
5MT3140A	Processing, lithics	Middle Archaic	M2DD	250
5MT3140B	Processing, lithics	Late Archaic - Basketmaker II	M2DD	250
5MT3249	Processing, fire assoc and vegetal	Middle Archaic	M2CE	650
5MT3261	Processing, lithics	Middle Archaic	M2C	690
5MT3270	Processing, fire assoc.	Middle Archaic	M2C	425
5MT7329A	Processing, fire assoc., lithics and vegetal	Late Archaic - Basketmaker II	M2DD	750
5MT8458A	Processing, fire assoc. and lithics	Middle Archaic	M2DD	450
5MT8459A	Processing, lithics	Middle Archaic?	M2DD	200
5MT8532A	Processing, fire assoc., lithics and vegetal	Late Archaic - Basketmaker II	M2DD	900
5MT8566B	Processing, lithics	Middle Archaic	M2CE	680

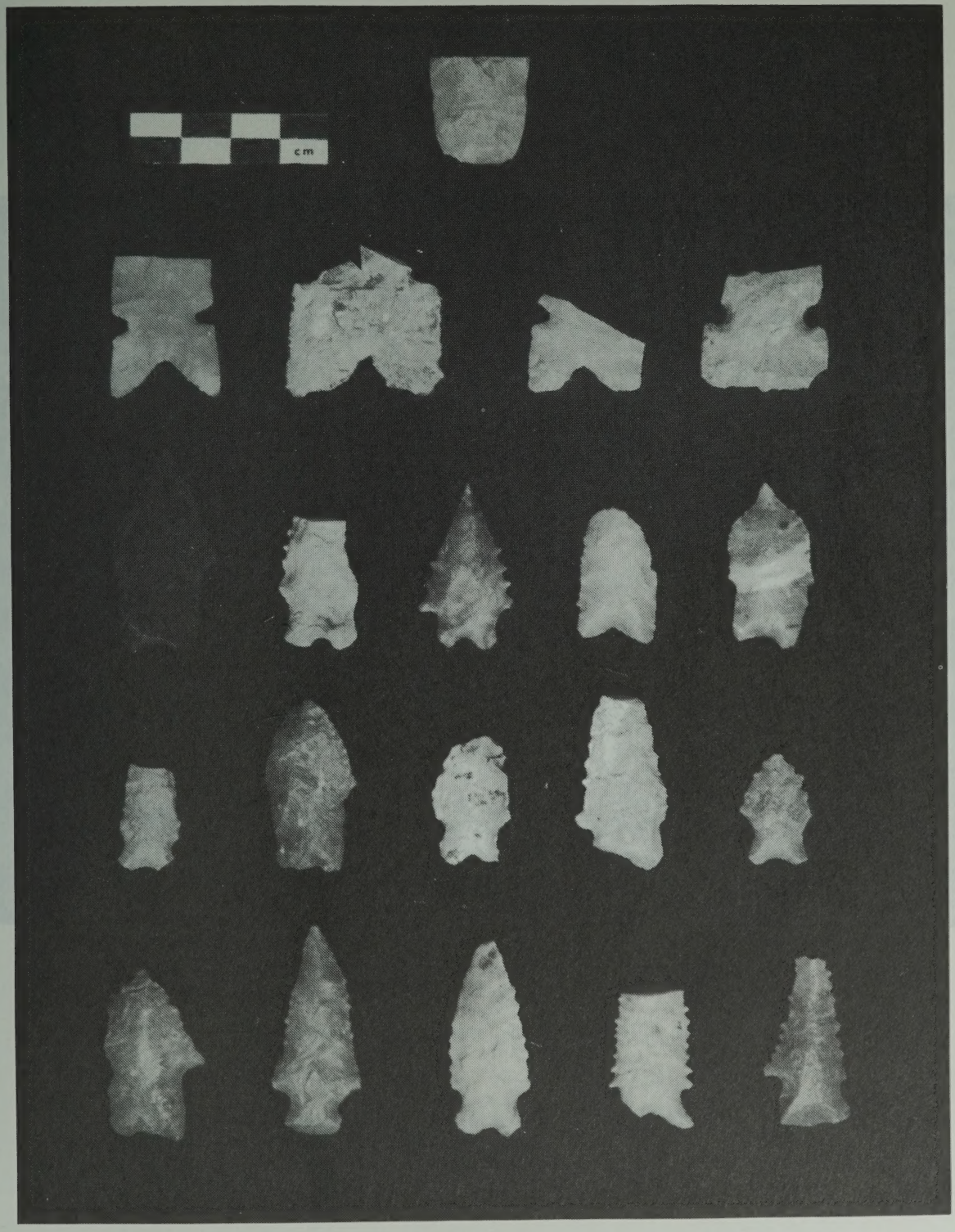

Figure 5-2. Photograph Illustrating Projectile Points Used to Date Sites to the Early (top row) and Middle (bottom rows) Archaic Time Periods.

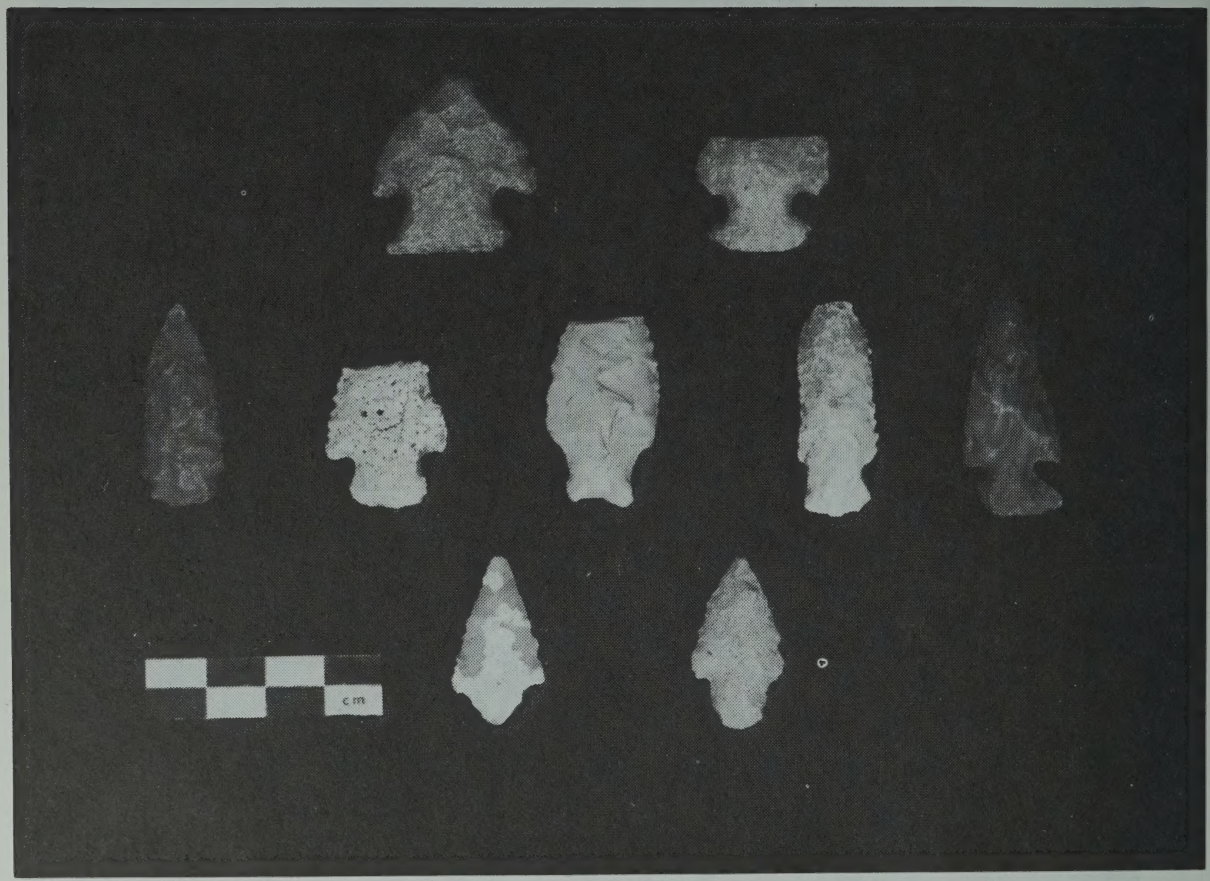

Figure 5-3. Photograph Illustrating Projectile Points Used to Date Sites to the Late Archaic - Basketmaker II Time Period.

Settlement Patterns

The distribution of Archaic sites on Mockingbird Mesa is quite striking, as illustrated in Figure 5-4. As can been seen from this figure, most of the Archaic sites cluster in the central third of Mockingbird Mesa. It is interesting to note that the aboriginal preference for this part of the mesa was established during the Archaic times.

The single Early Archaic site is situated along the eastern mesa rim overlooking Sandstone Canyon. From this location it is possible to see for miles up and down the canyons to the south and east. Being situated along the mesa rim, the site occupies the interface between the canyon slopes and the mesa top. This location places it on shallow, rocky M-class soils while at the same time it facilitates access to both the upland resources of the mesa and the lowland resources of the canyon.

An interesting cluster of nine Middle Archaic sites is present along the upper reaches of two intermittent drainages to Sandstone Canyon. Here, the drainages are transforming themselves from shallow, dirt-banked washes to fairly deep, stone-walled canyons; this area therefore offers a greater degree of physiographic variability than is found in much of the mesa interior. In addition, a well-developed spring is located along one of these drainages. The four Middle Archaic sites located elsewhere on the mesa were all situated near well-developed drainages; one was on a bench, one was on a canyon rim, and two were on a flat-topped spur ridge. All 13 temporal components are located on shallow M-class soils, which is consistent with the theory that Middle Archaic peoples were primarily hunters and gatherers, and not farmers.

The four Late Archaic-Basketmaker II sites are the most widely-distributed of the Archaic sites on Mockingbird Mesa. No preference for any one portion of the mesa is apparent from this distribution. Three of the four temporal components were situated on M-class soils; the fourth was situated on R-class soils, and as such, constitutes the mesa's only Archaic temporal component found on this type of soil. The three sites on M-class soils were all situated on mesa rims overlooking well-developed canyon systems. This type of topographic setting would have provided easy access to upland as well as lowland resources. The one site located on R-class soils was thought to be the remains of a temporary habitation. Perhaps the inhabitants of this site were farmers as well as hunters and gatherers and chose this location for its agricultural potential.

EXCAVATION DATA

No Archaic sites have been excavated on Mockingbird Mesa.

SUMMARY AND REGIONAL COMPARISON

The evidence for an Archaic population on Mockingbird Mesa adds to the growing data base on the Archaic in the Four Corners Region. On examining this data base, it can be seen that Mockingbird's Archaic sites most closely resemble those Archaic sites found in the Northern San Juan River Basin.

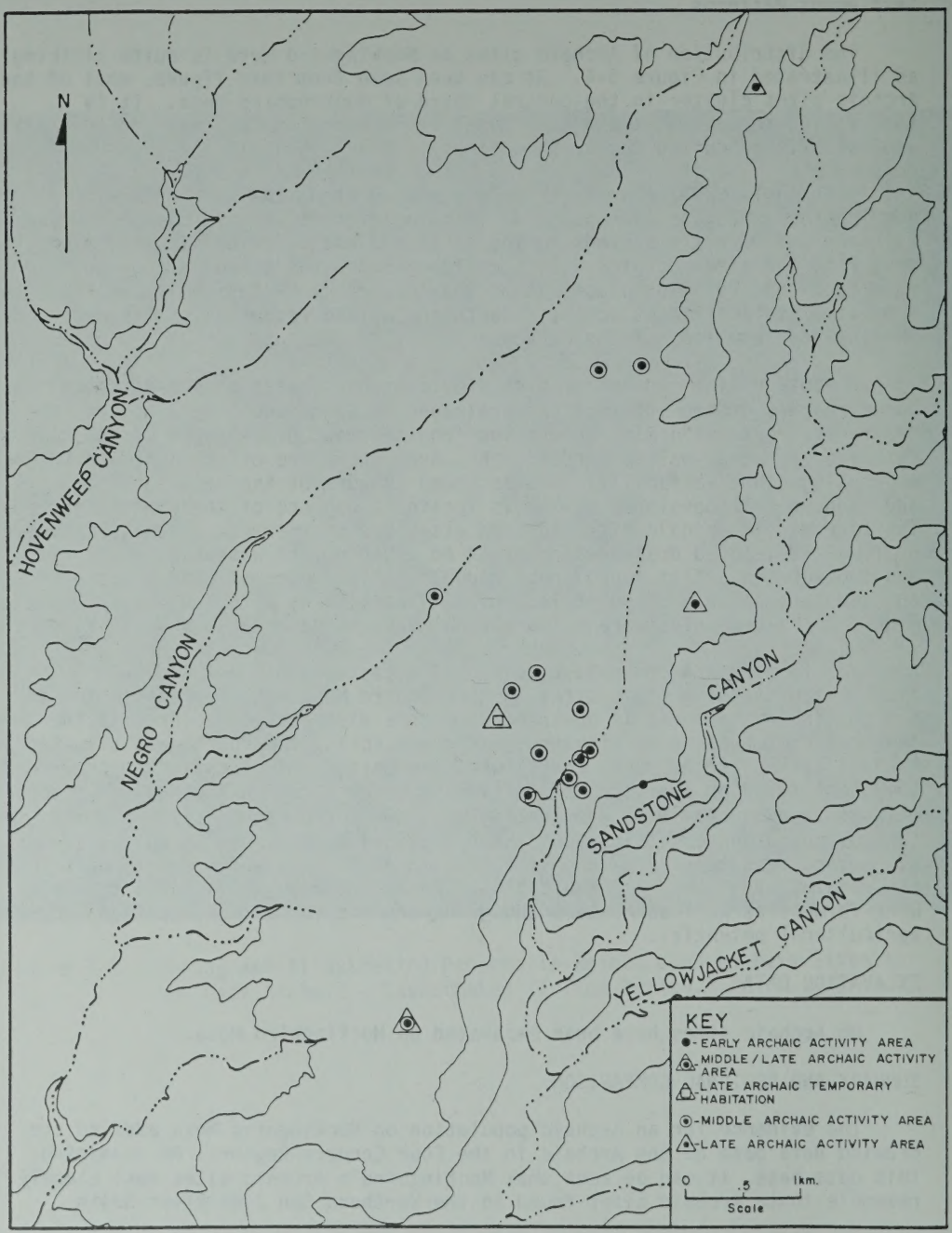

Figure 5-4. Map Illustrating the Distribution of Archaic Sites on Mockingbird Mesa.

Site Composition

The Early and Middle Archaic occupation of Mockingbird Mesa is represented by limited activity sites or campsites which are composed of scatters of lithic materials and which occasionally contain surface features. This site composition is similar to that of other Archaic sites found throughout the Four Corners Region (Simmons 1981, Ware 1981, Karlson 1982), and probably reflects the nomadic existence of the Archaic peoples.

The Late Archaic-Basketmaker II occupation of Mockingbird Mesa is represented by several limited activity/campsites and a temporary habitation. This site composition is similar to that of Basketmaker II sites on Cajon Mesa (Winter 1976) and in the Dolores River Valley (Gross 1984), but is different from that of Basketmaker II sites in the Los Pinos (Eddy 1966) and upper Animas (Morris and Burgh 1954) valleys where sites were composed of pithouses, sheets of refuse, fire hearths, and storage pits.

Topographic Situation

The Early and Middle Archaic sites on Mockingbird Mesa are situated along the mesa's edge in areas of high environmental diversity. In terms of the topographic setting of its Archaic sites, Mockingbird Mesa is similar to Cajon Mesa, where sites are situated on ridges above springs and at canyon/mesa edges (Winter 1976:283) and Hamilton Mesa, where sites are situated along canyon rims (Karlson 1982:3). It is different from Ridges Basin, where sites are located in a pass at the convergence of two valleys (Ware 1981:24) or the southern San Juan Basin, where sites are situated in sand dune fields. These differences are probably attributable to differences in topography and resource distribution between Mockingbird Mesa, Ridges Basin, and the southern San Juan Basin.

The Late Archaic-Basketmaker II sites on Mockingbird are located on canyon rims and in the mesa interior. This topographic setting is similar to those observed for Basketmaker II sites on Cajon (Winter 1976:284) and Cedar (Lipe and Matson 1974) mesas.

Paleodemography

Based on the limited data recovered from Mockingbird Mesa, it appears that during the Archaic period, utilization of the mesa peaked during the Middle Archaic. Evidence for similar peaks during the Middle Archaic has been found on the Dolores Plateau (B. Hibbets personal communication) and in the northern portion of the southern San Juan Basin (Simmons 1981:16). In contrast a peak in sites is noted for the Late Archaic-Basketmaker II period in the southern portion of the southern San Juan Basin (ibid), the Animas Valley (Morris and Burgh 1954) and Cedar Mesa (Lipe and Matson 1974). It was in these latter three areas that the transition to sedentarism and agriculture apparently occurred. Based on the survey data, Mockingbird Mesa appears to have been only marginally involved in this transition.

Anasazi: AD 450 - 1300

As stated previously, 700 Anasazi temporal components were identified on Mockingbird Mesa. Based primarily on ceramic evidence, 472 of these 700 components could be assigned to specific periods, as follows: 82 dated to the Basketmaker III period, 25 dated to the Pueblo I period, 179 dated to the Pueblo II period, and 186 dated to the Pueblo III period. Due primarily to insufficient ceramic evidence, 228 of the 700 components could not be assigned to specific periods; instead they were assigned to one of three general categories: Early Anasazi (AD 450 - 900), Late Anasazi (AD 900 - 1300), or Anasazi (AD 450 - 1300). For the most part, the following discussion will be concerned with the 472 temporal components which could be assigned to specific periods.

Basketmaker III: AD 450-725

SURVEY DATA

Introduction

The Basketmaker III period marked the first time when a substantial human population lived on Mockingbird Mesa. Between the years 450 and 725 A.D. Basketmaker III peoples occupied much of Mockingbird Mesa. The evidence for this occupation consists of 82 sites, of which 62 (76%) were permanent habitations, 7 (8%) were temporary habitations and 13 (16%) were activity areas. Table 5-2 presents information concerning the Basketmaker III sites located on Mockingbird Mesa.

Dating

The dating of these 82 sites to the Basketmaker III time period was based on the presence of a specific ceramic assemblage. This ceramic assemblage was composed of Chapin Black-on-white and Chapin Gray sherds, and/or Early Pueblo white and Early Pueblo gray sherds. An example of this Basketmaker III ceramic assemblage is illustrated in Figure 5-5.

Surface Manifestations

Surface manifestations of Basketmaker III sites were often inconspicuous. At the most they consisted of upright sandstone slab alignments or low mounds of burned stone in association with artifact concentrations; at the least they consisted of sparse scatters of sherds.

Permanent Habitations

Permanent habitations exhibited the most substantial remains of all Basketmaker III sites; an example of this is illustrated in Figure 5-6. On a permanent habitation, surface indications usually consisted of an area of rock at the northern end of the site and a concentration of artifacts at the southern end of the site. The area of rock represented surface structures while the artifact concentration represented the trash midden.

The surface structures were represented by one of three configurations: (1) concentrations of small, unshaped sandstone rocks, (2) circular alignments

Table 5-2. Basketmaker III Sites on Mockingbird Mesa.

PERMANENT HABITATIONS

Site No.	Habitation Type	Estimated No. of Households	Soil	Distance to Spring in Meters
5MT0932A	Single	1	R7D	500
5MT0947	Multiple	2	ROD	1,000
5MT0949	Single	1	M2CE	700
5MT0971A	Single	1	ROC	900
5MT0986	Multiple	2	ROC	325
5MT0987A	Single	1	ROC	300
5MT0995B	Single	1	ROC	850
5MT1532A	Single	1	ROC	500
5MT1554A	Multiple	4	R4D	600
5MT1560	Single	1	R4D	1,100
5MT1580	Single	1	M2DD	600
5MT1598B	Single	1	M2DD	175
5MT1604A	Multiple	2	ROB	150
5MT1606A	Single	1	ROB	275
5MT3029	Multiple	2	M2DD	350
5MT3050A	Multiple	2	M2DD	500
5MT3062A	Single	1	R4D	750
5MT3065	Single	1	ROC	600
5MT3066	Single	1	M2C	625
5MT3072	Multiple	2	R4D	400
5MT3101	Single	1	R7D	400
5MT3105	Single	1	ROC	520
5MT3108	Single?	1	R7D	700
5MT3111	Single?	1	ROC	675
5MT3113	Single	1	ROC	600
5MT3130A	Multiple	3	ROC	1,000
5MT3134	Single	1	R7D	930
5MT3173A	Single?	1	R4C	200
5MT3177A	Single	1	ROC	500
5MT3180A	Single	1	ROC	200
5MT3214A	Single	1	ROC	400

Table 5-2. Basketmaker III Sites on Mockingbird Mesa (continued).

PERMANENT HABITATIONS (continued)

Site No.	Habitation Type	Estimated No. of Households	Soil	Distance to Spring in Meters
5MT3216B	Single	1	ROC	750
5MT3255A	Single	1	ROC	650
5MT3282	Single	1	ROC	700
5MT3283	Multiple	2	ROC	800
5MT3313	Single	1	ROD	550
5MT3319	Single	1	ROD	600
5MT3320	Single	1	ROD	950
5MT3323	Single?	1	M2DD	1,200
5MT3980	Single	1	ROC	330
5MT5011A	Single	1	ROD	650
5MT5018	Single	1	ROD	1,100
5MT5019	Single	1	M2DD	1,400
5MT6739A	Single	1	R7D	250
5MT6741A	Single	1	ROC	600
5MT6746A	Multiple	2	ROC	250
5MT6860	Single	1	ROB	800
5MT7323A	Single	1	ROB	550
5MT7347	Single	1	ROB	600
5MT7351	Single	1	ROB	900
5MT7358A	Single	1	M2C	800
5MT7363	Single	1	R4D	1,200
5MT7385	Single	1	M2DD	250
5MT7386	Single	1	M2DD	250
5MT7406	Single	1	R4D	1,000
5MT8463	Multiple	2	ROC	450
5MT8510	Multiple	2	ROD	525
5MT8511	Multiple	2	ROD	450
5MT8529	Single	1	ROD	300
5MT8557	Multiple	3	M2C	500
5MT8560	Single	1	M2C	130
5MT8565A	Single	1	M2DD	800

Table 5-2. Basketmaker III Sites on Mockingbird Mesa (concluded).

TEMPORARY HABITATIONS

Site No.	Habitation Type	Soil	Distance to Spring in Meters
5MT0945	Temporary	M2DD	1,100
5MT1533B	Temporary?	ROC	450
5MT3070	Temporary	R4D	450
5MT3117	Temporary	ROC	1,000
5MT6355	Temporary	ROC	300
5MT8552A	Temporary	M2DD	400
5MT8584A	Temporary	M2CE	500

ACTIVITY AREA SITES

Site No.	Activity Area Type	Soil	Distance to Spring in Meters
5MT3114A	Processing, fire assoc.	ROC	725
5MT3115	Processing, fire assoc.	ROC	850
5MT3147A	Processing, fire assoc.	ROC	580
5MT3167A	Not further specified	ROC	600
5MT3236	Processing, fire assoc.	ROC	800
5MT3312	Not further specified	ROB	450
5MT3321A	Processing, fire assoc.	ROD	1,100
5MT6743	Not further specified	ROC	500
5MT7354A	Storage, granary	M2CE	50
5MT7990	Processing, lithic	M2DD	100
5MT8467	Processing, fire assoc.	M2DD	100
5MT8548	Processing, fire assoc.	ROB	430
5MT8563A	Processing, fire assoc. and lithic	M2DD	1,000

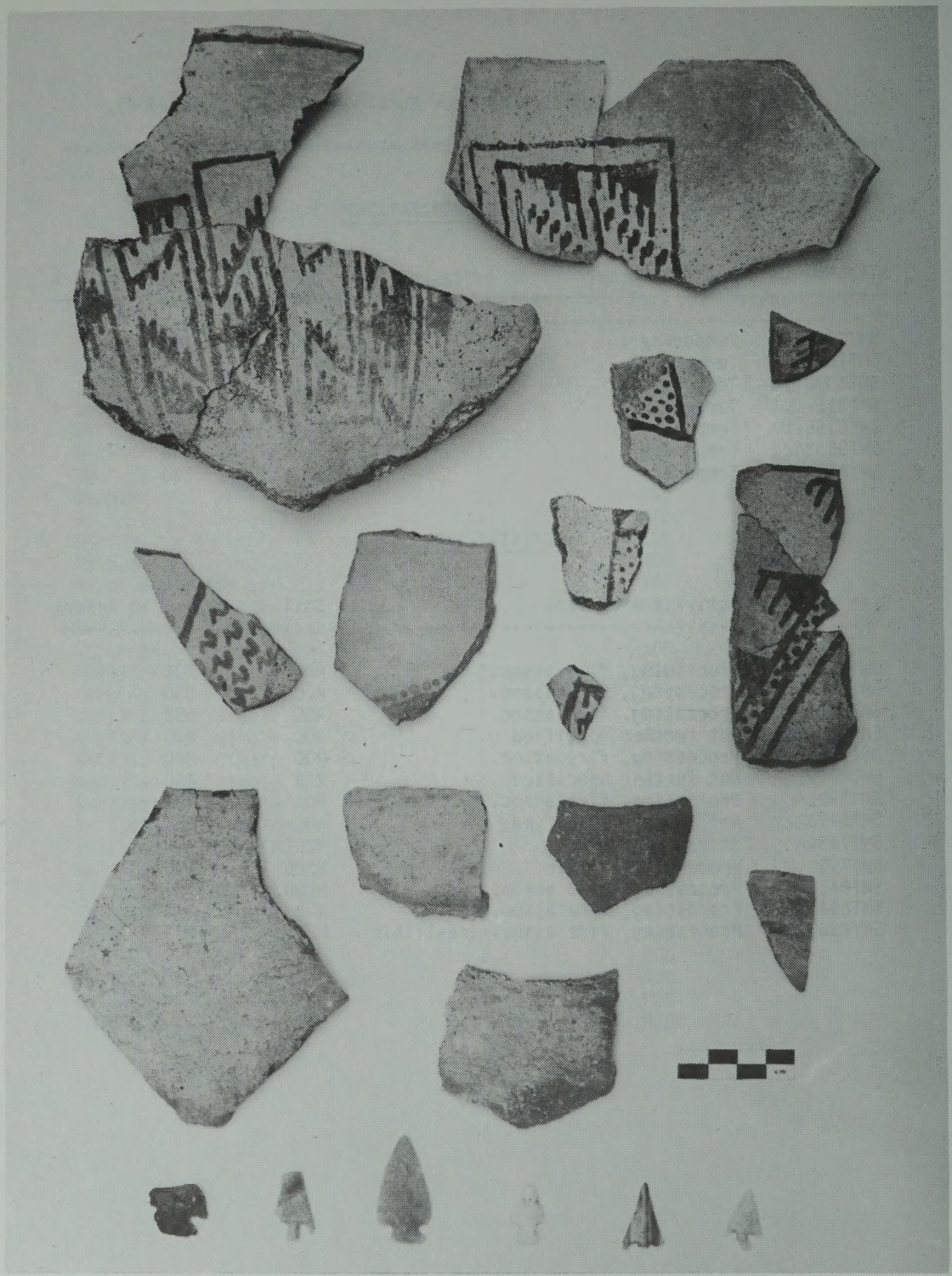

Figure 5-5. Photograph Illustrating an Example of a Basketmaker III Ceramic and Projectile Point Assemblage.

Figure 5-6. Photograph Illustrating Surface Manifestations of a Basketmaker III Permanent Habitation Site.

of large upright sandstone slabs, or (3) linear mounds of sandstone rocks and upright slabs. The sandstone rock concentrations were usually low circular to rectangular mounds no more than 20 centimeters in height and between 1 to 3 meters in width and 1 to 5 meters in length. The circular upright slab alignments measured consistently between 1 to 2.4 meters in diameter. The linear mounds of rocks and upright slabs measured up to 40 centimeters in height, 9 meters in width, and 20 meters in length. The first two configurations are probably the remains of non-contiguous surface structures such as storage cists and hearths, while the third configuration is probably the remains of contiguous surface structures such as rooms. All three types of surface structures usually showed evidence of burning and often contained pieces of grass-and-stick impressed burned adobe.

While a light scatter of sherds and lithics usually surrounded the surface structure area, the densest concentration of artifacts was found in the trash midden. The midden was usually situated to the south, southeast, or southwest of the surface room area, within a distance of 20 meters. On thickly-deposited middens, the soil was often stained gray with the accumulated build-up of ash and charcoal.

On Basketmaker III permanent habitations, direct evidence for subsurface pithouses was found only infrequently. One habitation exhibited a visible surface depression rimmed with the caliche-and-soil backfill which resulted from the prehistoric excavation of the pithouse. Two other habitations exhibited black charcoal-stained soil and upright slabs where small erosional drainages had cut through burned pithouses. On most habitations, though, pithouse depressions or stains were not visible on the ground surface. A form of indirect evidence for subsurface pithouses was often present, however. On many habitations, this indirect evidence was the "blank" space between the surface structures and the trash midden, a space where the density of cultural materials was perceptibly lower than it was to either the north or south.

Temporary Habitations

The Basketmaker III temporary habitations were basically similar to, but smaller in size than, the permanent habitations. These sites contained fewer and smaller surface features and smaller and sparser middens than did the permanent habitation sites, and lacked any evidence of pithouses.

Activity Areas

The activity areas were even less substantial than the temporary habitations. These sites were composed of diagnostic ceramic assemblages, either isolated or in direct association with burned rock concentrations or lithic scatters. (The one exception is a rockshelter granary, which is known from excavation to date to the Basketmaker III period [Ives 1973:27].)

Settlement Patterns

The distribution of Basketmaker III sites on Mockingbird Mesa indicates that the early Anasazi farmers found virtually all of the mesa suitable for settlement or utilization. As illustrated in Figure 5-7, sites of the Basketmaker III period are located throughout Mockingbird Mesa.

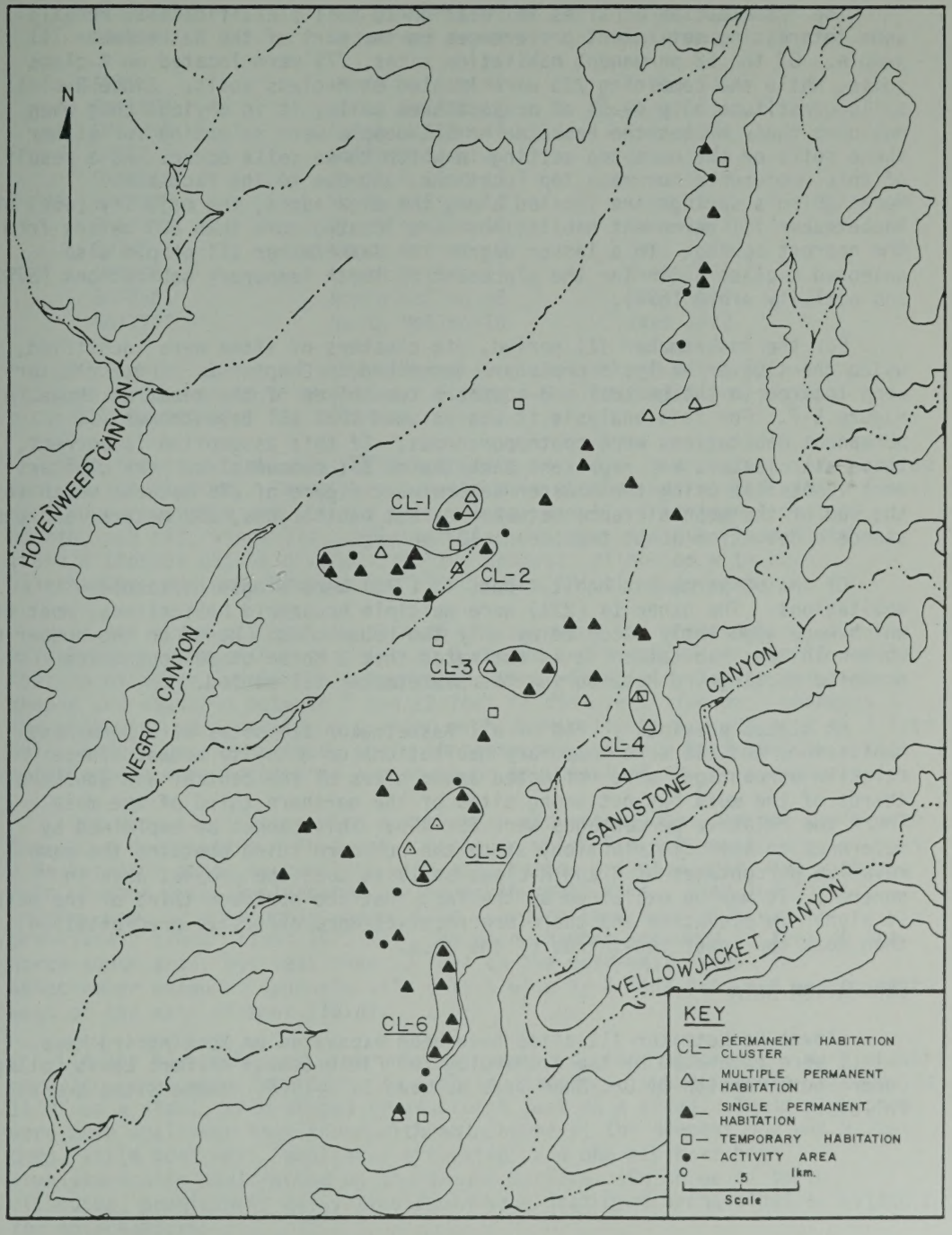

Figure 5-7. Map Illustrating the Distribution of Basketmaker III Sites on Mockingbird Mesa.

The distribution of sites in relation to soil classifications reveals some interesting settlement preferences on the part of the Basketmaker III people. Of the 62 permanent habitation sites, 77% were located on R-class soils, while the remaining 23% were located on M-class soils. Since R-class soils constitute only 49.3% of project area soils, it is obvious that when building their houses the Basketmaker III people were selecting for either these soils or the mesa top setting in which these soils occur. As a result of this preference for mesa top locations, and due to the fact that Mockingbird's springs are located along the mesa edges, the majority (65%) of Basketmaker III permanent habitations were located more than 600 meters from the nearest spring. To a lesser degree the Basketmaker III people also selected R-class soils for the placement of their temporary habitations (57%) and activity areas (69%).

For the Basketmaker III period, six clusters of sites were identified, using the cluster analysis procedure described in Chapter 2. These clusters were located in the central and southern two-thirds of the mesa, as shown in Figure 5-7. For this analysis it was assumed that all Basketmaker III permanent habitations were contemporaneous. If this assumption is correct, these six clusters may represent Basketmaker III communities. The clusters were identified using the cluster determinant figure of 376 meters, which is the sum of the mean distance between nearest habitations, 239 meters, and one standard deviation about that mean, 137 meters.

Of the 62 permanent habitations, 48 (77%) were single household habitations. The other 14 (23%) were multiple household habitations, most of which were apparently occupied by only two households. Based on the number of households per habitation it is estimated that a total of 80 households occupied Mockingbird Mesa during the Basketmaker III period.

As stated previously, 76% of all Basketmaker III sites were permanent habitations and 24% were temporary habitations or activity areas. These relative percentages were reflected among sites of the central and southern thirds of the mesa but not among sites of the northern third of the mesa. There the relative percentages were 55%-45%. This cannot be explained by reference to soil distribution, since the northern third contains the same relative percentages of R and M-class soils as does the project area in general. It may be explained by the fact that the northern third of the mesa is higher in elevation and therefore receives more effective precipitation than does the lower two-thirds of the mesa.

EXCAVATION DATA

Eleven Basketmaker III sites have been excavated on Mockingbird Mesa. All 11 were excavated by the Archaeological Field School of Fort Lewis College under the direction of Dr. John Ives between 1970-1973. These sites are as follows.

Smithsonian Number	Fort Lewis College Temporary Number	Preliminary Report Reference
5MT971	North McElmo 4E	Ives 1971b
5MT1604	North McElmo 2	Ives 1971a
5MT3319	North McElmo 19	Ives 1973
5MT5011	North McElmo 20	Ives 1973
5MT5018	North McElmo 15	Ives 1973
5MT7323	North McElmo 14	Ives 1972
5MT7354	North McElmo 16	Ives 1973
5MT8511	North McElmo 6	Ives 1973
5MT8557	North McElmo 17	Ives 1973
5MT8565	North McElmo 18	Ives 1973
5MT????	North McElmo 10	Ives 1972

During the course of excavations, 13 pithouses and eight slab-lined storage structures were excavated. Figure 5-8 illustrates one of the excavated Basketmaker III sites.

The thirteen pithouses, although quite variable in shape and size, shared two characteristics. These were (1) the main chamber was roofed with a 4-post roof support system and (2) the main chamber usually contained a central hearth, ash pit, wingwalls, deflector slab, sipapu, and sub floor cists. These pithouses can be divided into two groups: pithouses with both mainchambers and antechambers and pithouses with only mainchambers.

In the seven pithouses with both mainchambers and antechambers, the mainchambers were either circular or D shaped and measured between 16 and 30 feet in diameter, while the antechambers were either circular or horse-shoe shaped and measured between 7 and 22 feet in diameter. The main chambers of the pithouses were usually excavated prehistorically to a depth of 2 to 3 feet below modern ground surface, while the antechambers were very shallow. The antechambers were located to the south or southeast of the mainchambers.

One unusual pithouse with mainchamber and antechamber did not conform to the above description. This was a pithouse which "in all appearances ... was a Basketmaker pithouse complete with antechamber oriented west, but with the main chamber greatly elongated on the north-south axis. When looked at another way, it is roughly shaped like a generalized Hohokam house of pre-classic times" (Ives 1973:9). The main chamber measured 20 feet on the north-south axis, but less than 10 feet on the east-west axis. The antechamber measured approximately 5 feet wide by 6 feet long and was oriented west of the main chamber (ibid).

In the six pithouses with only mainchambers, the mainchambers were either circular (measuring from 18 to 30 feet in diameter), subrectangular (measuring 11'8" on a side), or D-shaped (measuring 9 feet on a side). These pithouses were much shallower than those with antechambers; the deepest one was 2 feet deep, while most were "shallowly excavated" and one may have been prehistorically constructed on the ground surface. On three of these pithouses, prehistoric activities could have destroyed archaeological evidence for antechambers.

The eight slab-lined storage structures were excavated on four sites. These structures were located to the west, northwest, or north of the

Figure 5-8. Photograph Illustrating an Excavated Basketmaker III Pithouse and Storage Room on Mockingbird Mesa. (From Ives 1973, Plate 1)

pithouses. They measured between 18 and 29 inches in depth. Four were circular and between 7'1" and 8' in diameter. The other four were rectangular or D-shaped and between 6'6" and 7'10" on a side. Three were isolated on three sites while the remaining five formed an arc 44 feet long on the fourth site.

SUMMARY AND REGIONAL COMPARISON

The results of survey and excavation indicate that the Basketmaker III people who inhabited Mockingbird Mesa practiced a lifestyle similar in many respects to that of their contemporaries in the San Juan Basin.

Site Composition

The permanent habitations of the Basketmaker III period on Mockingbird Mesa were for the most part composed of single pithouses, surface storage structures, and a midden. Based on Ives' excavations, slightly more than half of the pithouses contained both mainchambers and antechambers, while slightly less than half contained only mainchambers. The surface storage structures were for the most part non-contiguous, although some contiguous structures were apparent.

Since the great majority of excavated Basketmaker III pithouses in the northern San Juan Area contain both mainchambers and antechambers (Hayes and Lancaster 1975; Lipe and Breternitz 1980:22), it would appear that Mockingbird Mesa has an unusually high percentage of pithouses which contain only mainchambers. The non-contiguous arrangement of surface structures on Mockingbird Mesa has been found on many other excavated Basketmaker III sites in the northern San Juan Area (Lipe and Breternitz 1980:22); in addition, the contiguous arrangement of surface structures found on one Mockingbird site has been found on other excavated sites dating to the latter part of this period (J. Wheat personal communication).

Topographic Situation

Basketmaker III sites on Mockingbird Mesa were most often found on the center of the mesa where soil resources are deep. This is similar to findings on Mesa Verde (Hayes and Lancaster 1975; Rohn 1977), Cajon Mesa (Winter 1976) and Alkali Ridge (Ford 1983; Honeycutt and Fetterman 1985).

Paleodemography

Compared to the preceding Basketmaker II period, Mockingbird Mesa was relatively well-populated during the Basketmaker III period. In this respect, Mockingbird Mesa is representative of much of the northern San Juan, including areas such as Mesa Verde (Hayes and Lancaster 1975; Rohn 1977), the McElmo Creek basin (Wheat 1955, Rohn 1975, Fetterman and Honeycutt 1980, Kane 1975, Schlanger 1985) the Dolores River Valley (Kane 1983), and Alkali Ridge (Honeycutt and Fetterman 1985). It is interesting to note, however, that two areas which had supported relatively large Basketmaker II populations, namely the upper Animas River Valley and Cedar Mesa, supported only relatively small Basketmaker III populations.

The majority of Basketmaker III permanent habitations on Mockingbird Mesa apparently represent single family dwellings. This is consistent with data recovered from the Dolores River Valley (Kane 1983), Mesa Verde (Birkedal 1976), the Yellow Jacket area (J. Wheat personal communication), and the Dove Creek area (Adams 1982 and Gerwitz 1982).

Pueblo I: AD 725 - 900

SURVEY DATA

Introduction

During the Pueblo I time period, a marked decrease occurred in the Anasazi population of Mockingbird Mesa. This decrease is indicated by the low number of Pueblo I temporal components identified during survey: only 25 were located within the project boundaries. Of these 25, 20 were permanent habitations, two were temporary habitations, and three were activity areas. Table 5-3 presents information on the Pueblo I temporal components of Mockingbird Mesa.

Dating

Ceramic assemblages were the primary basis for dating sites or temporal components to the Pueblo I period. Ceramic assemblages which contained Piedra Black-on-white, Moccasin Gray Neckbanded, Abajo Black-on-red, or Bluff Black-on-red, were dated to this time. On sites which contained large ceramic assemblages, it was usually possible to further refine the dating to one of two periods, Early Pueblo I or Late Pueblo I. The Early Pueblo I time period, AD 725 - 800, was defined on the basis of a ceramic assemblage which contained Chapin Gray or Early Pueblo Gray sherds; Chapin Black-on-white, Piedra Black-on-white, or Early Pueblo White sherds; and Abajo Black-on-red, Bluff Black-on-red, or Early Pueblo Red sherds. Figure 5-9 illustrates an example of this ceramic assemblage. The Late Pueblo I time period, AD 800 - 900, was defined on the basis of a ceramic assemblage which contained Chapin Gray or Early Pueblo Gray sherds; Piedra Black-on-white or Early Pueblo White sherds; Bluff Black-on-red or Early Pueblo Red sherds; and Moccasin or Mancos Neckbanded sherds. Figure 5-10 illustrates an example of this ceramic assemblage.

Surface Manifestations

Surface manifestations of Pueblo I temporal components varied with regard to time and site type. The following briefly describes the surface manifestations of Early and Late Pueblo I temporal components.

Early Pueblo I

Surface manifestations of permanent habitations consisted of the remains of surface rooms and features and midden areas. The surface structures were represented by either scatters or low mounds of small unshaped sandstone rocks or upright sandstone slab alignments. On some sites, the presence of pieces of stick-and-grass impressed burned adobe indicated that these surface structures had been made of jacal. The remains of both contiguous and non-contiguous surface structures were found on sites of this period. Middens were generally situated to the south or east of the habitation area and consisted of either low mounds or thin sheets of artifactual materials. Pithouse depressions or stains were usually not visible on the ground surface. However, on one site a pithouse was visible, as it had been cut through by an erosional drainage which exposed charcoal-stained fill and an upright slab feature.

Table 5-3. Pueblo I Sites on Mockingbird Mesa.

PERMANENT HABITATIONS

Site Number	Habitation Type	Time Period	Number of Households	Soil	Distance to Spring in Meters
5MT0948A	Single	Pueblo I	1	ROB	875
5MT0971B	Single	Early Pueblo I	1	ROC	900
5MT0997	Multiple	Early Pueblo I	2	ROC	450
5MT1534	Single	Late Pueblo I	1	ROC	475
5MT1604B	Multiple	Early Pueblo I	3	ROB	150
5MT1604C	Multiple	Late Pueblo I	3	ROB	150
5MT1618	Single	Early Pueblo I	1	R4D	900
5MT1620	Single	Early Pueblo I	1	R4D	800
5MT1621	Single	Early Pueblo I	1	V3C	650
5MT1624A	Single	Late Pueblo I	1	ROC	600
5MT3036A	Multiple	Late Pueblo I	2	R4D	650
5MT3048	Multiple	Early Pueblo I	3	R4D	400
5MT3049A	Multiple	Early Pueblo I	2	M2DD	550
5MT3145	Single	Early Pueblo I	1	ROC	600
5MT3173B	Single?	Pueblo I	1	R4C	200
5MT7309A	Single	Late Pueblo I	1	ROC	850
5MT7317	Single	Early Pueblo I	1	ROC	500
5MT7360A	Single	Late Pueblo I	1	M2C	1,000
5MT7370A	Single	Late Pueblo I	1	ROC	500
5MT8465	Single	Early Pueblo I	1	M2DD	400

TEMPORARY HABITATIONS

Site Number	Habitation Type	Time Period	Soil	Distance to Spring in Meters
5MT8462	Temporary	Pueblo I	ROB	700
5MT8509A	Fieldhouse	Pueblo I	ROD	600

ACTIVITY AREAS

Site Number	Activity Area Type	Time Period	Soil	Distance to Spring in Meters
5MT3221	Not further specified	Late Pueblo I	M2C	850
5MT3307	Processing, fire assoc. and vegetal	Pueblo I	ROC	600
5MT7354B	Storage, granary	Pueblo I	M2CE	50

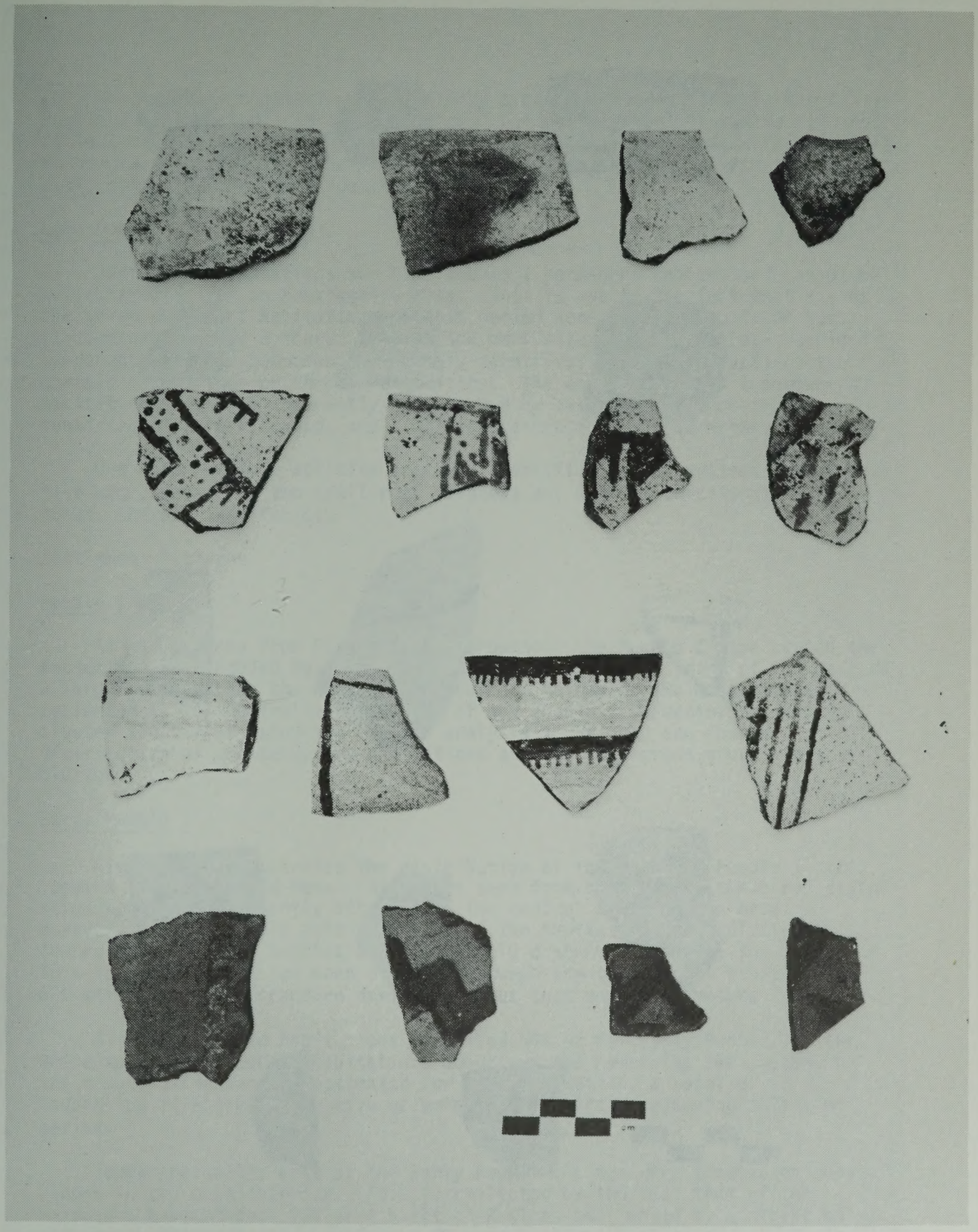

Figure 5-9. Photograph Illustrating an Early Pueblo I Ceramic Assemblage. Chapin Gray, top row; Chapin Black-on-white, second row; Piedra Black-on-white, third row; Abajo Red-on-orange, bottom row.

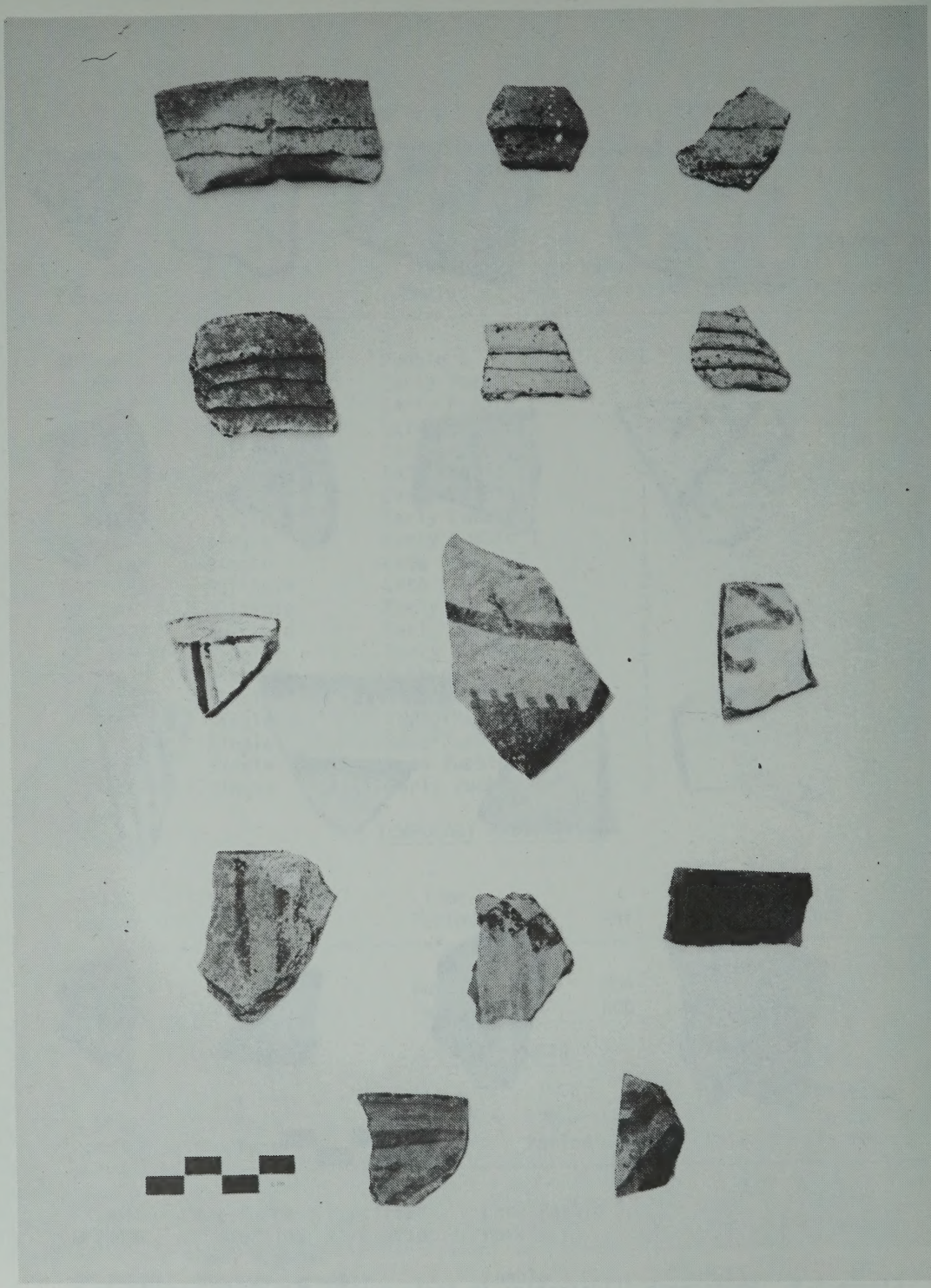

Figure 5-10. Photograph Illustrating a Late Pueblo I Ceramic Assemblage. Moccasin Gray, top row; Mancos Gray, second row; Piedra Black-on-white, third row; Bluff Black-on-red, bottom two rows.

No temporary habitations or activity areas were identified for the Early Pueblo I time period. It is the authors' belief that these negative findings reflect methodological problems associated with dating limited surface remains rather than the actual number of temporary habitations or activity areas utilized during the Early Pueblo I period.

Late Pueblo I

Surface manifestations for Late Pueblo I permanent habitations cannot be well-characterized on Mockingbird Mesa. This is due to the fact that six of the seven permanent habitations of this period were overlain by later Pueblo II components which obscured the surface manifestations of the Late Pueblo I components. These components were only identified through analysis of the ceramic assemblages or through excavation. The one Late Pueblo I permanent habitation which was apparently undisturbed by later Anasazi construction consisted of a rock, sherd, and lithic concentration 5 by 10 meters in size.

One Late Pueblo I activity area was identified in the project area. This site was composed of two small rock clusters and a small concentration of rocks, sherds, and lithics.

Settlement Patterns

Pueblo I

As can be seen from Figure 5-11, throughout the Pueblo I time period the Anasazi of Mockingbird Mesa tended to utilize the central third of the mesa to a larger extent than the northern or southern thirds of the mesa. This is reflected in the centralized location of the Pueblo I permanent habitation cluster identified using the cluster analysis technique, and in the distribution of the temporary habitations and activity areas around this cluster.

Early Pueblo I

Figure 5-12 illustrates the distribution of the 11 Early Pueblo I sites located on Mockingbird Mesa. As can be seen from this figure these habitation sites were most frequently situated in the central third of the mesa. However, while slightly more than half of the habitations were clustered there, the remaining habitations were widely distributed across the mesa. This is reflected in the mean distance between any two nearest habitations, 620 meters, and the standard deviation about that mean, 520 meters.

Single household habitations comprised 64% of all Early Pueblo I sites, while multiple household habitations comprised the remaining 36%. Based on the number of households estimated for each habitation, a total of 17 households is estimated to have occupied Mockingbird Mesa during this time period.

Topographically, most of the Early Pueblo I sites were located on tops of ridges in the mesa interior. This is reflected by the fact that of the permanent habitations, 73% were built on R-class soil while by contrast only 18% were built on M-class soils and 9% were built on V-class soils. During this time period, only 29% of all households were located more than 600 meters from the nearest spring.

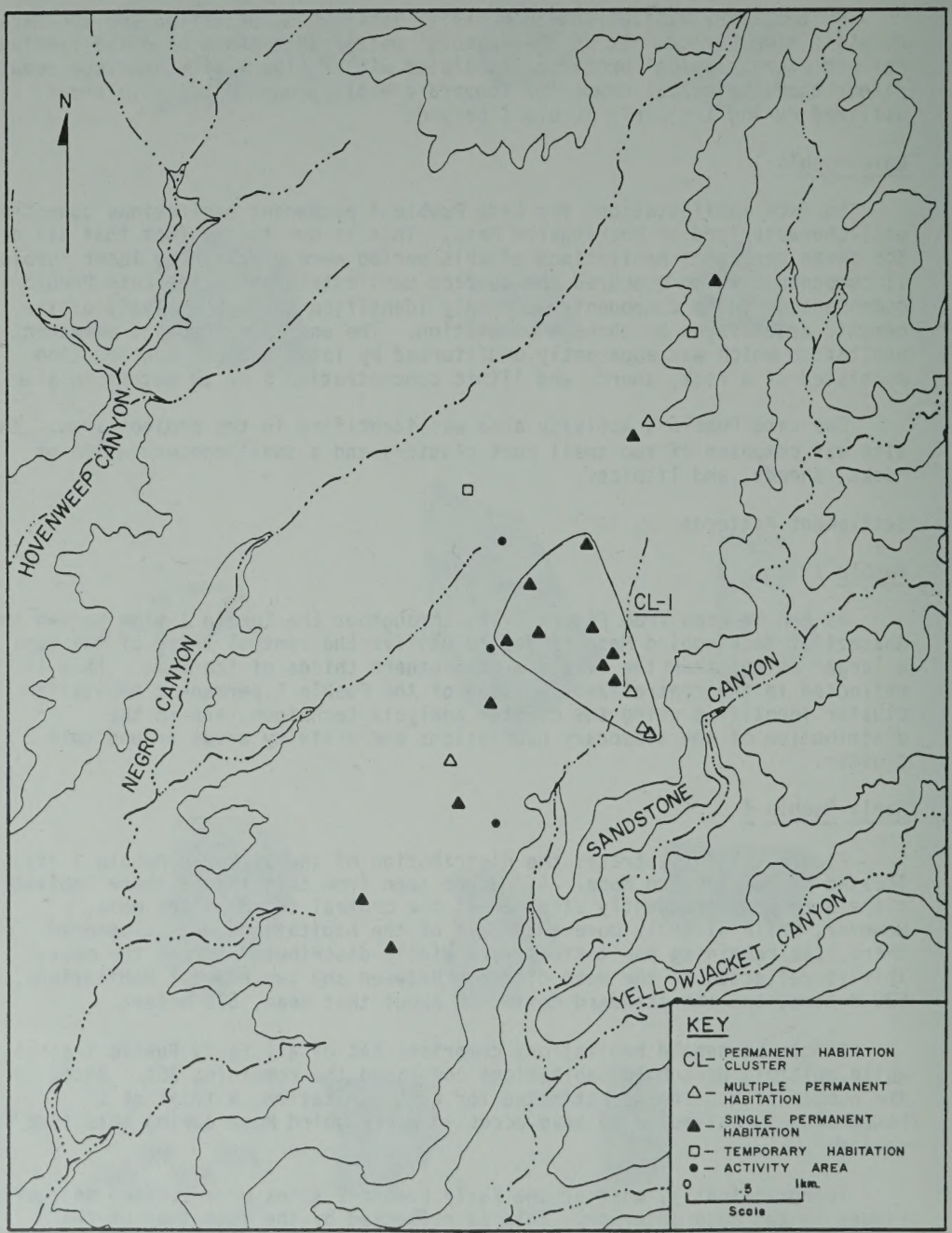

Figure 5-11. Map Illustrating the Distribution of Pueblo I sites on Mockingbird Mesa.

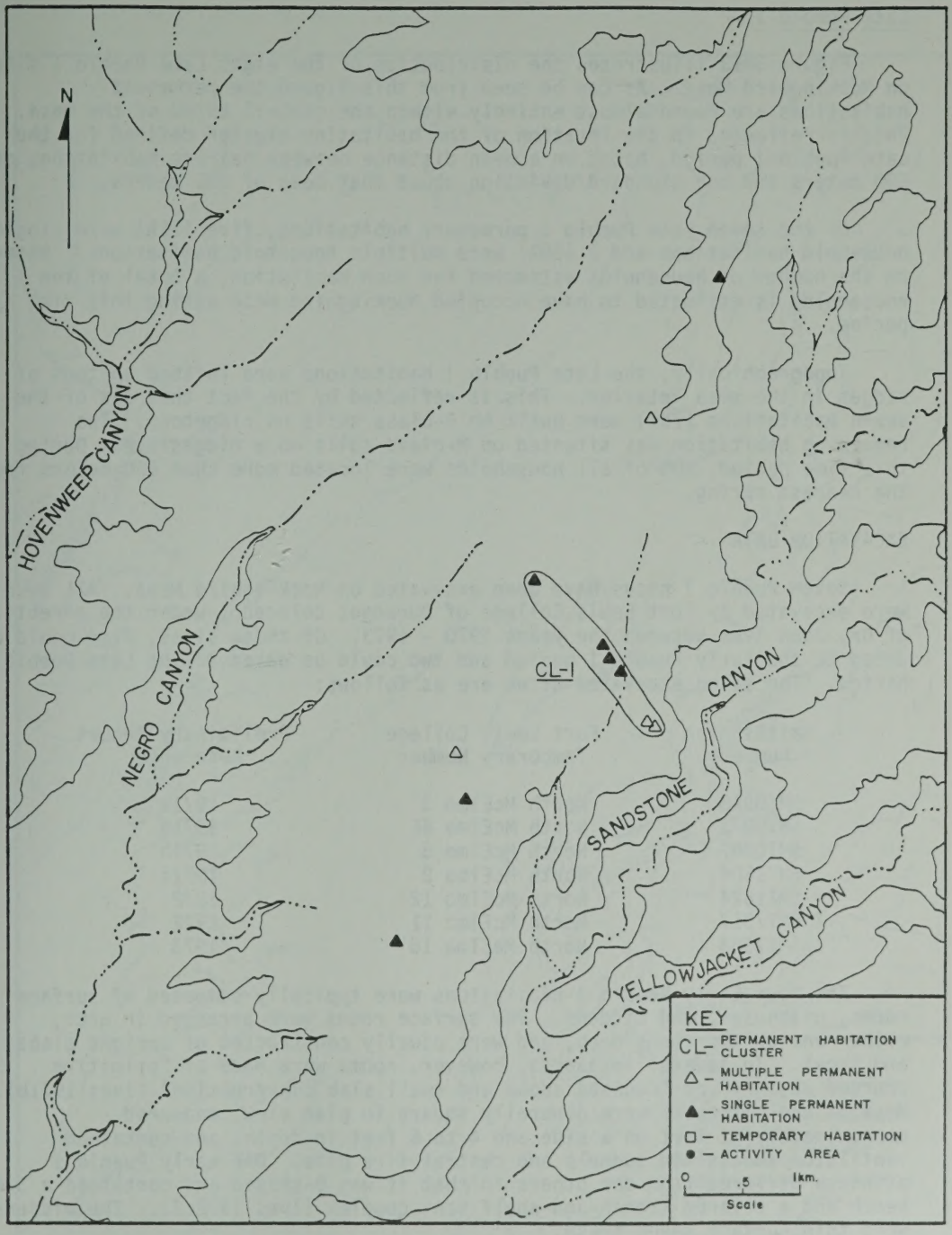

Figure 5-12. Map Illustrating the Distribution of Early Pueblo I sites on Mockingbird Mesa.

Late Pueblo I

Figure 5-13 illustrates the distribution of the eight Late Pueblo I sites on Mockingbird Mesa. As can be seen from this figure the permanent habitations are found almost entirely within the central third of the mesa. This is reflected in the location of the habitation cluster defined for the Late Pueblo I period, based on a mean distance between nearest habitations of 600 meters and one standard deviation about that mean of 300 meters.

Of the seven Late Pueblo I permanent habitations, five (71%) were single household habitations and 2 (29%) were multiple household habitations. Based on the number of households estimated for each habitation, a total of ten households is estimated to have occupied Mockingbird Mesa during this time period.

Topographically, the Late Pueblo I habitations were located on tops of ridges in the mesa interior. This is reflected by the fact that six of the seven habitations (75%) were built on R-class soils on ridgetops. The remaining habitation was situated on M-class soils on a ridgeslope. During this time period, 50% of all households were located more than 600 meters from the nearest spring.

EXCAVATION DATA

Seven Pueblo I sites have been excavated on Mockingbird Mesa. All seven were excavated by Fort Lewis College of Durango, Colorado, under the direction of Dr. John Ives between the years 1970 - 1973. Of these sites, five could be dated to the Early Pueblo I period and two could be dated to the Late Pueblo I period. The seven excavated sites are as follows:

Smithsonian Number	Fort Lewis College Temporary Number	Preliminary Report Reference
5MT0948	North McElmo 3	1971a
5MT0971	North McElmo 4E	1971b
5MT0997	North McElmo 5	1971b
5MT1604	North McElmo 2	1971a
5MT1624	North McElmo 12	1972
5MT7317	North McElmo 11	1972
5MT7354	North McElmo 16	1973

The four Early Pueblo I habitations were typically composed of surface rooms, pithouses, and middens. The surface rooms were arranged in arcs, either one or two rooms deep, and were usually constructed of upright slabs and jacal. In several instances, however, rooms were made of "primitive coursed masonry" or "coursed adobe and small slab construction" (Ives 1971b). Most of the pithouses were generally square in plan view, measured approximately 12 feet on a side and 4 to 6 feet in depth, and contained ventilator shafts and tunnels and central fire pits. One early Pueblo I pithouse differed from the others in that it was D-shaped and contained a 3/4 bench and a covered trench-and-shelf vent complex (Ives 1972:3). The middens were thin surface sheet trash.

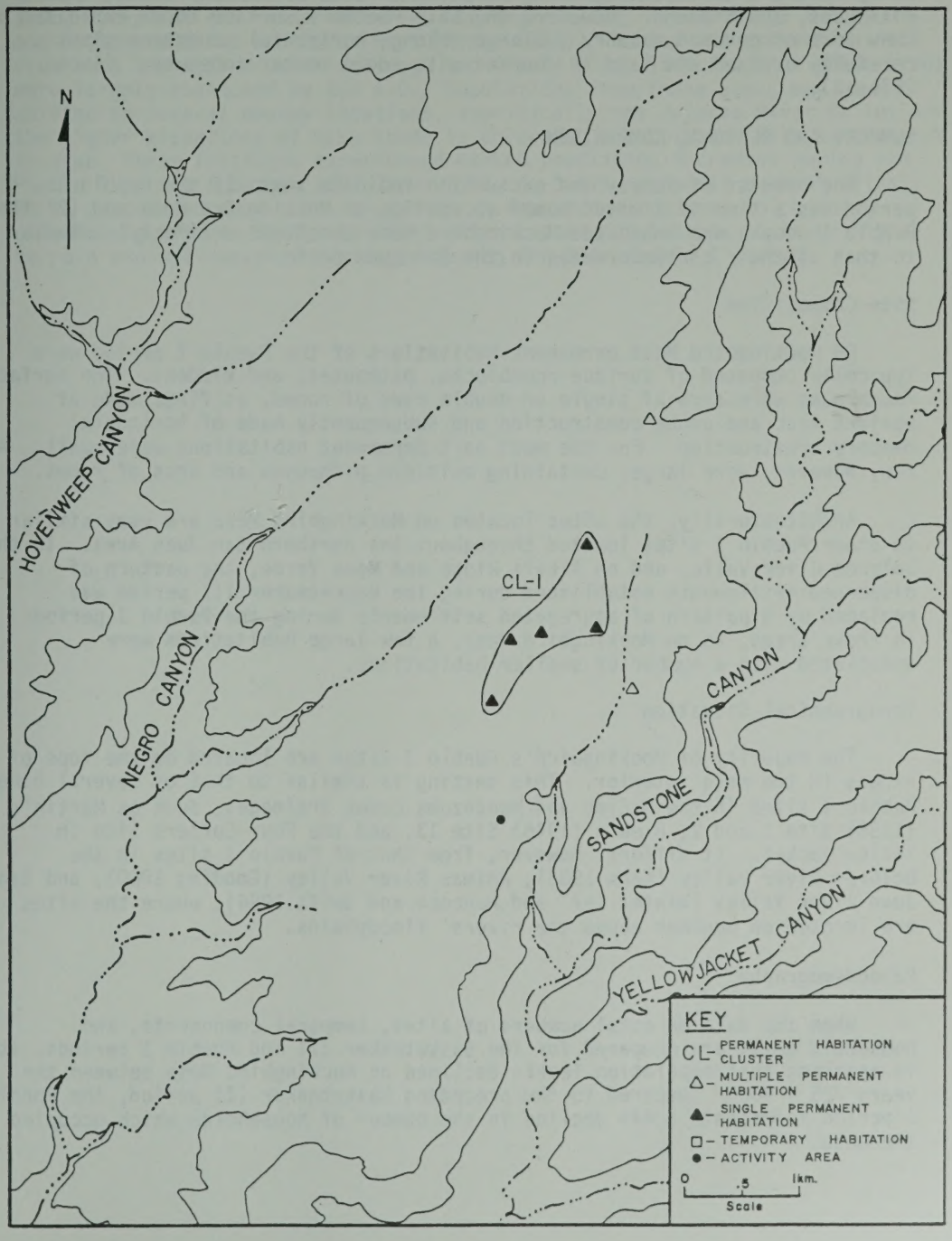

Figure 5-13. Map Illustrating the Distribution of Late Pueblo I sites on Mockingbird Mesa.

The two Late Pueblo I habitations were similar in composition to the Early Pueblo I habitations, being composed of arcs of surface rooms, square pithouses, and middens. However, the Late Pueblo I surface rooms exhibited a "new form of coursed masonry ...large oblong, horizontal sandstone slabs ... carefully dressed and laid in courses with adobe mortar inbetween" (Ives 1971a:3).

SUMMARY AND REGIONAL COMPARISON

The results of survey and excavation indicate that (1) the Pueblo I period was a time of limited human occupation on Mockingbird Mesa and (2) the Pueblo I people who inhabited Mockingbird Mesa practiced a lifestyle similar to that of their contemporaries in the San Juan Basin.

Site Composition

On Mockingbird Mesa permanent habitations of the Pueblo I period were typically composed of surface roomblocks, pithouses, and middens. The surface roomblocks were arcs of single or double rows of rooms, at first made of upright slab and adobe construction and subsequently made of horizontal masonry construction. For the most part permanent habitations were small. A few, however, were large, containing multiple pithouses and arcs of rooms.

Architecturally, the sites located on Mockingbird Mesa are very similar to other Pueblo I sites located throughout the northern San Juan Area. In the Dolores River Valley and on Alkali Ridge and Mesa Verde, the pattern of dispersed settlements established during the Basketmaker III period was replaced by a pattern of aggregated settlements during the Pueblo I period. In these areas, as on Mockingbird Mesa, a few large habitations were associated with a number of smaller habitations.

Topographical Situation

The majority of Mockingbird's Pueblo I sites are located on the tops of ridges in the mesa interior. This setting is similar to that of several other Pueblo I sites in the McElmo and Montezuma Creek drainages, such as Martin's (1938) Site 1 and 2, Brew's (1946) Site 13, and the Four-Corners Site in Yellow Jacket. It differs, however, from that of Pueblo I sites in the Dolores River Valley (Kane 1983), Animas River Valley (Gooding 1980), and San Juan River Valley (Winter 1977 and Hancock and Swift 1984), where the sites are located on benches above the rivers' floodplains.

Paleodemography

When the data on total numbers of sites, temporal components, and household units are compared for the Basketmaker III and Pueblo I periods, it is apparent that population levels declined on Mockingbird Mesa between the years 725 - 900. Compared to the preceding Basketmaker III period, the Pueblo I period represents a 64% decline in the number of households which occupied the mesa.

Similar population declines have been documented for several nearby areas, including parts of the McElmo Creek drainage (Fetterman and Honeycutt 1982, Honeycutt and Fetterman 1982, Schlanger 1985), Alkali Ridge (Honeycutt and Fetterman 1985) and Cedar Mesa (Haase 1983). Survey and excavation data from both the McElmo Creek drainage and Alkali Ridge indicate that these areas were largely abandoned by 800 A.D. Populations from these areas may have shifted to several nearby locations, specifically the Dolores River Valley and the higher elevations of Mesa Verde in Colorado, and Chippean-Milk Ranch Point in Utah. These locations experienced marked population increases during the Pueblo I period (Louthan 1977, Kane 1984, J. Smith, personal communication). It is postulated that such population shifts were a response to changing climatic conditions (Peterson 1983) which caused populations to favor higher terrain and well-watered drainages during the late Pueblo I period.

Pueblo II: AD 900 - 1100

SURVEY DATA

The Pueblo II time period witnessed a dramatic increase in the Anasazi population of Mockingbird Mesa. This population increase is indicated by the 179 Pueblo II components located on the mesa. Of these components, 47% were permanent habitations, 31% were temporary habitations, and 22% were activity areas. Table 5-4 presents information on the Pueblo II components of Mockingbird Mesa.

Dating

The dating of the 179 Pueblo II components was based primarily on ceramic assemblages. All components dated to the Pueblo II time period contained (at a minimum) Mancos Black-on-white, Cortez Black-on-white, and/or Mancos Corrugated sherds. Based on the composition of their ceramic assemblages, many of the components could be further dated to either the Early Pueblo II or Late Pueblo II time period, or to both time periods. The Early Pueblo II period, AD 900 - 1000, was defined on the basis of a ceramic assemblage which contained both Cortez Black-on-white and Mancos Black-on-white sherds, and/or Mancos Corrugated (or corrugated) or Mancos Neckbanded sherds. Figure 5-14 illustrates an example of this ceramic assemblage. The Late Pueblo II period, AD 1000-1100, was defined on the basis of a ceramic assemblage which contained Mancos Black-on-white as its diagnostic whiteware, and Mancos Corrugated as its diagnostic grayware. Figure 5-15 illustrates an example of this ceramic assemblage. In order to reliably determine the presence of a specific temporal component, large numbers of sherds were needed from a site for analysis. Since large numbers of sherds were usually present on permanent habitations, specific temporal components could be determined for most of these sites. Conversely, since large numbers of sherds were usually not present on temporary habitations and activity areas, specific temporal components could not be determined for most of these sites.

Surface Manifestations

Surface manifestations of Pueblo II temporal components varied with regard to time and site type. The following briefly describes the surface manifestations of Early and Late Pueblo II sites.

Early Pueblo II

Surface manifestations of permanent habitations generally consisted of the remains of a roomblock and a midden area. The roomblocks appeared on the surface as scatters or low mounds of burned adobe and small sandstone rocks. There is much variability in the shape of the adobe and rock mounds, with L-shaped, crescentric shaped, and linear shaped mounds being present on sites of this time period. The rocks, probably used in the construction of jacal walls, were generally small- to medium-sized pieces of unshaped sandstone, and frequently exhibited signs of being thermally-altered. South or east of the remains of the roomblock was generally found the midden area, where dense concentrations of construction debris, ash, and discarded tools were located. Between the roomblocks and the middens, kiva depressions were apparent on approximately 40% of the sites. On the other 60%, the kiva depressions were

Table 5-4. Pueblo II Sites on Mockingbird Mesa.

PERMANENT HABITATIONS

Site Number	Habitation Type	Time Period	Estimated Number of Households	Soil	Distance to Spring in Meters
5MT0930A	Multiple	Late Pueblo II	2	ROB	800
5MT0948B	Single	Early Pueblo II	1	ROB	875
5MT0948C	Single	Late Pueblo II	1	ROB	875
5MT0970A	Multiple	Early Pueblo II	2	ROC	600
5MT0970C	Multiple	Late Pueblo II	2	ROC	600
5MT0971C	Single	Early Pueblo II	1	ROC	900
5MT0972	Multiple	Early Pueblo II	2	ROC	900
5MT0992A	Single	Early Pueblo II	1	R4C	550
5MT0992B	Single	Late Pueblo II	1	R4C	550
5MT0993A	Multiple	Early Pueblo II	2	R4C	500
5MT0993B	Multiple	Late Pueblo II	2	R4C	500
5MT0994	Single	Early Pueblo II	1	ROC	850
5MT0995A	Single	Early Pueblo II	1	ROC	850
5MT0996	Multiple	Early Pueblo II	3	ROC	650
5MT0998A	Single	Late Pueblo II	1	M2DD	600
5MT0999A	Single	Late Pueblo II	1	ROC	325
5MT1531A	Single	Early Pueblo II	1	ROC	650
5MT1531C	Single	Late Pueblo II	1	ROC	650
5MT1536	Single	Late Pueblo II	1	ROC	335
5MT1544A	Multiple	Late Pueblo II	6	M2CE	1,100
5MT1548A	Single	Early Pueblo II	1	M2DD	340
5MT1559	Single	Early Pueblo II	1	M2DD	525
5MT1561A	Single	Early Pueblo II	1	M2C	1,200
5MT1581	Single	Early Pueblo II	1	R4C	60
5MT1583A	Single	Early Pueblo II	1	R4C	600
5MT1583B	Single	Late Pueblo II	1	R4C	600
5MT1599A	Single	Late Pueblo II	1	M2DD	0
5MT1601A	Multiple	Late Pueblo II	2	ROC	400
5MT1604D	Multiple	Early Pueblo II	4	ROB	150
5MT1609A	Single	Late Pueblo II	1	ROB	600
5MT1617	Single	Early Pueblo II	1	R4D	800
5MT1624B	Single	Early Pueblo II	1	ROC	600
5MT1626A	Single	Late Pueblo II	1	M2DD	150
5MT3036B	Multiple	Early Pueblo II	2	R4D	650
5MT3050B	Single	Late Pueblo II	1	M2DD	500
5MT3082	Single	Early Pueblo II	1	R4D	400
5MT3103	Single	Early Pueblo II	1	R7D	400
5MT3173C	Multiple	Late Pueblo II	2	R4C	200
5MT3224	Multiple	Early Pueblo II	2	ROC	600
5MT3232	Single	Early Pueblo II	1	ROC	850
5MT3240	Single	Late Pueblo II	1	ROC	700
5MT3262	Single	Early Pueblo II	1	M2C	575

Table 5-4. Pueblo II Sites on Mockingbird Mesa (continued).

PERMANENT HABITATIONS (concluded)

Site Number	Habitation Type	Time Period	Estimated Number of Households	Soil	Distance to Spring in Meters
5MT3287A	Single	Early Pueblo II	2	ROC	300
5MT3288	Single	Early Pueblo II	1	ROC	280
5MT3303A	Single	Late Pueblo II	1	M2DD	175
5MT3304	Single	Late Pueblo II	1	M2DD	400
5MT3314	Multiple	Early Pueblo II	2	ROD	600
5MT3318	Single	Late Pueblo II	1	ROD	700
5MT3322A	Single	Late Pueblo II	1	M2DD	1,400
5MT3324	Single	Late Pueblo II	1	M2DD	1,200
5MT4993A	Multiple	Late Pueblo II	2	ROB	400
5MT4993D	Multiple	Early Pueblo II	2	ROB	400
5MT5011B	Single	Early Pueblo II	1	ROD	650
5MT5826	Multiple	Early Pueblo II	2	ROC	400
5MT6739B	Single	Late Pueblo II	1	R7D	250
5MT6740	Single	Early Pueblo II	1	ROC	500
5MT6742	Single	Late Pueblo II	1	ROC	450
5MT6744A	Single	Early Pueblo II	1	ROC	900
5MT6744B	Single	Late Pueblo II	1	ROC	900
5MT6754	Single	Early Pueblo II	1	ROC	400
5MT6827	Single	Early Pueblo II	1	ROB	900
5MT6861	Single	Early Pueblo II	1	ROC	550
5MT6958	Multiple	Early Pueblo II	2	ROB	350
5MT6967A	Multiple	Late Pueblo II	6	M2DD	350
5MT7283	Single	Early Pueblo II	1	ROC	700
5MT7292A	Single	Early Pueblo II	1	M2C	250
5MT7292B	Single	Late Pueblo II	1	M2C	250
5MT7295	Single	Early Pueblo II	1	ROC	675
5MT7296A	Multiple	Early Pueblo II	2	ROC	675
5MT7309B	Single	Early Pueblo II	1	ROC	850
5MT7323B	Single	Late Pueblo II	1	ROB	550
5MT7337A	Multiple	Late Pueblo II	4	M2C	550
5MT7354C	Single	Late Pueblo II	1	M2CE	50
5MT7360C	Single	Early Pueblo II	1	M2C	1,000
5MT7360D	Single	Late Pueblo II	1	M2C	1,000
5MT7370B	Multiple	Early Pueblo II	4	ROC	500
5MT7370C	Multiple	Late Pueblo II	4	ROC	500
5MT7400A	Multiple	Late Pueblo II	4	M2C	850
5MT7405A	Multiple	Late Pueblo II	6	M2C	900
5MT8535	Single	Early Pueblo II	1	M2DD	825
5MT8537	Single	Early Pueblo II	1	ROB	550
5MT8546	Single	Early Pueblo II	1	ROB	460
5MT8565B	Single	Early Pueblo II	1	M2DD	800
5MT8774A	Multiple	Late Pueblo II	6	M2C	800

Table 5-4. Pueblo II Sites on Mockingbird Mesa (continued).

TEMPORARY HABITATIONS

Site Number	Habitation Type	Time Period	Soil	Distance to Spring in Meters
5MT0931	Fieldhouse	Pueblo II	R7D	550
5MT0933	Temporary	Early Pueblo II	ROC	700
5MT0934	Temporary	Pueblo II	M2CE	800
5MT0935	Temporary	Pueblo II	M2CE	1,000
5MT0938	Fieldhouse	Pueblo II	ROC	1,000
5MT0987B	Fieldhouse	Early Pueblo II	ROC	300
5MT0989	Fieldhouse	Pueblo II	R4C	500
5MT0990	Temporary	Pueblo II	ROC	350
5MT1594	Temporary	Pueblo II	M2CE	400
5MT3017	Fieldhouse	Pueblo II	R4D	1,025
5MT3024	Fieldhouse	Pueblo II	M2DD	900
5MT3039	Fieldhouse	Pueblo II	R4D	575
5MT3046	Temporary	Pueblo II	M2DD	550
5MT3053	Fieldhouse	Pueblo II	M2C	900
5MT3062B	Fieldhouse	Pueblo II	R4D	750
5MT3071	Fieldhouse	Pueblo II	ROC	450
5MT3079	Fieldhouse	Early Pueblo II	R4D	375
5MT3106	Fieldhouse	Pueblo II	R7D	600
5MT3146	Temporary	Pueblo II	ROC	570
5MT3155	Temporary	Pueblo II	ROC	270
5MT3162	Temporary	Pueblo II	ROC	375
5MT3174	Fieldhouse	Pueblo II	ROC	580
5MT3178	Temporary	Pueblo II	ROC	575
5MT3179	Temporary	Pueblo II	ROC	350
5MT3188	Fieldhouse	Pueblo II	R7D	300
5MT3192	Fieldhouse	Pueblo II	M2CE	200
5MT3193	Fieldhouse	Pueblo II	M2CE	300
5MT3250	Temporary	Pueblo II	M2CE	750
5MT3251	Temporary	Pueblo II	M2CE	800
5MT3252	Temporary	Pueblo II	M2C	800
5MT3260	Fieldhouse	Pueblo II	M2C	800
5MT3264	Temporary	Pueblo II	M2C	500
5MT3274	Temporary	Pueblo II	ROC	500

Table 5-4. Pueblo II Sites on Mockingbird Mesa (continued).

TEMPORARY HABITATIONS (concluded)

Site Number	Habitation Type	Time Period	Soil	Distance to Spring in Meters
5MT3286	Temporary	Pueblo II	ROC	500
5MT3289	Temporary	Pueblo II	ROC	300
5MT3296B	Fieldhouse	Pueblo II	ROC	450
5MT3311	Temporary	Early Pueblo II	M2DD	600
5MT4991	Fieldhouse	Pueblo II	ROB	590
5MT4992	Fieldhouse	Early Pueblo II	ROB	500
5MT6741B	Fieldhouse	Pueblo II	ROC	600
5MT6745	Fieldhouse	Pueblo II	ROC	250
5MT6746B	Temporary	Late Pueblo II	ROC	250
5MT6753	Fieldhouse	Pueblo II	ROB	300
5MT6820	Fieldhouse	Pueblo II	M2DD	450
5MT6930	Fieldhouse	Pueblo II	ROB	600
5MT7293A	Temporary	Pueblo II	M2DD	275
5MT7330	Temporary	Early Pueblo II	R4D	800
5MT7331	Temporary	Pueblo II	M2DD	600
5MT7336	Temporary	Pueblo II	M2DD	640
5MT7369	Temporary	Pueblo II	M2C	1,000
5MT8499	Fieldhouse	Early Pueblo II	R7D	775
5MT8526	Fieldhouse	Pueblo II	M2DD	150
5MT8543	Fieldhouse	Early Pueblo II	M2DD	700
5MT8562	Fieldhouse	Late Pueblo II	M2DD	1,100
5MT8583	Temporary	Late Pueblo II	M2CE	560

ACTIVITY AREAS

Site Number	Activity Area Type	Time Period	Soil	Distance to Spring in Meters
5MT1517	Not Further Specified	Pueblo II	M2DD	150
5MT1528	Processing, fire assoc.	Pueblo II	ROC	900
5MT1584	Not Further Specified	Early Pueblo II	ROC	500
5MT1615	Processing, fire assoc. and lithic	Pueblo II	V3C	580
5MT3104	Not Further Specified	Pueblo II	R7D	400
5MT3114B	Not Further Specified	Pueblo II	ROC	725
5MT3163	Processing, fire assoc.	Pueblo II	ROC	550
5MT3175	Storage, cist	Pueblo II	M2DD	400

Table 5-4. Pueblo II Sites on Mockingbird Mesa (concluded).

ACTIVITY AREAS (concluded)

Site Number	Activity Area Type	Time Period	Soil	Distance to Spring in Meters
5MT3189	Processing, fire assoc. and lithic	Pueblo II	M2DD	50
5MT3200	Processing, fire assoc.	Pueblo II	ROC	400
5MT3204	Storage, granary	Pueblo II	M2CE	120
5MT3225	Processing, fire assoc.	Pueblo II	ROC	520
5MT3227	Storage, cist	Pueblo II	ROC	500
5MT3228	Not Further Specified	Pueblo II	ROC	350
5MT3231A	Not Further Specified	Pueblo II	ROC	800
5MT3248	Processing, fire assoc., lithic and vegetal	Pueblo II	M2CE	650
5MT3254	Processing, lithic	Pueblo II	R7D	900
5MT3265	Processing, fire assoc.	Pueblo II	M2C	625
5MT3268	Processing, fire assoc.	Pueblo II	M2C	700
5MT3284	Processing, fire assoc.	Pueblo II	ROC	800
5MT3296A	Agricultural, check dam & Processing, fire assoc.	Pueblo II	ROC	450
5MT3321B	Processing, fire assoc.	Pueblo II	ROD	1,100
5MT4994	Storage, granary	Pueblo II	M2CE	300
5MT7300	Processing, fire assoc.	Early Pueblo II	ROC	350
5MT7310	Processing, fire assoc.	Pueblo II	ROC	725
5MT7311	Processing, fire assoc.	Pueblo II	R7D	400
5MT7316	Processing, fire assoc.	Pueblo II	R7D	500
5MT7346	Processing, fire assoc.	Pueblo II	ROB	500
5MT7358B	Not Further Specified	Pueblo II	M2C	800
5MT7378	Processing, fire assoc.	Pueblo II	M2C	400
5MT7382	Not Further Specified	Pueblo II	M2CE	375
5MT7988	Not Further Specified	Pueblo II?	ROD	700
5MT8460	Processing, fire assoc. and lithic	Pueblo II	M2DD	225
5MT8469	Processing, fire assoc. and lithic	Early Pueblo II	M2DD	900
5MT8472	Processing, lithic	Pueblo II	M2DD	1,300
5MT8528	Processing, fire assoc. and lithic	Pueblo II	M2DD	380
5MT8531	Processing, fire assoc.	Pueblo II	M2DD	750
5MT8547	Processing, fire assoc. and lithic	Pueblo II	M2DD	40
5MT8550	Processing, lithic and vegetal	Pueblo II	M2DD	250
5MT8555	Processing, lithic and Storage, granary?	Pueblo II	M2CE	100

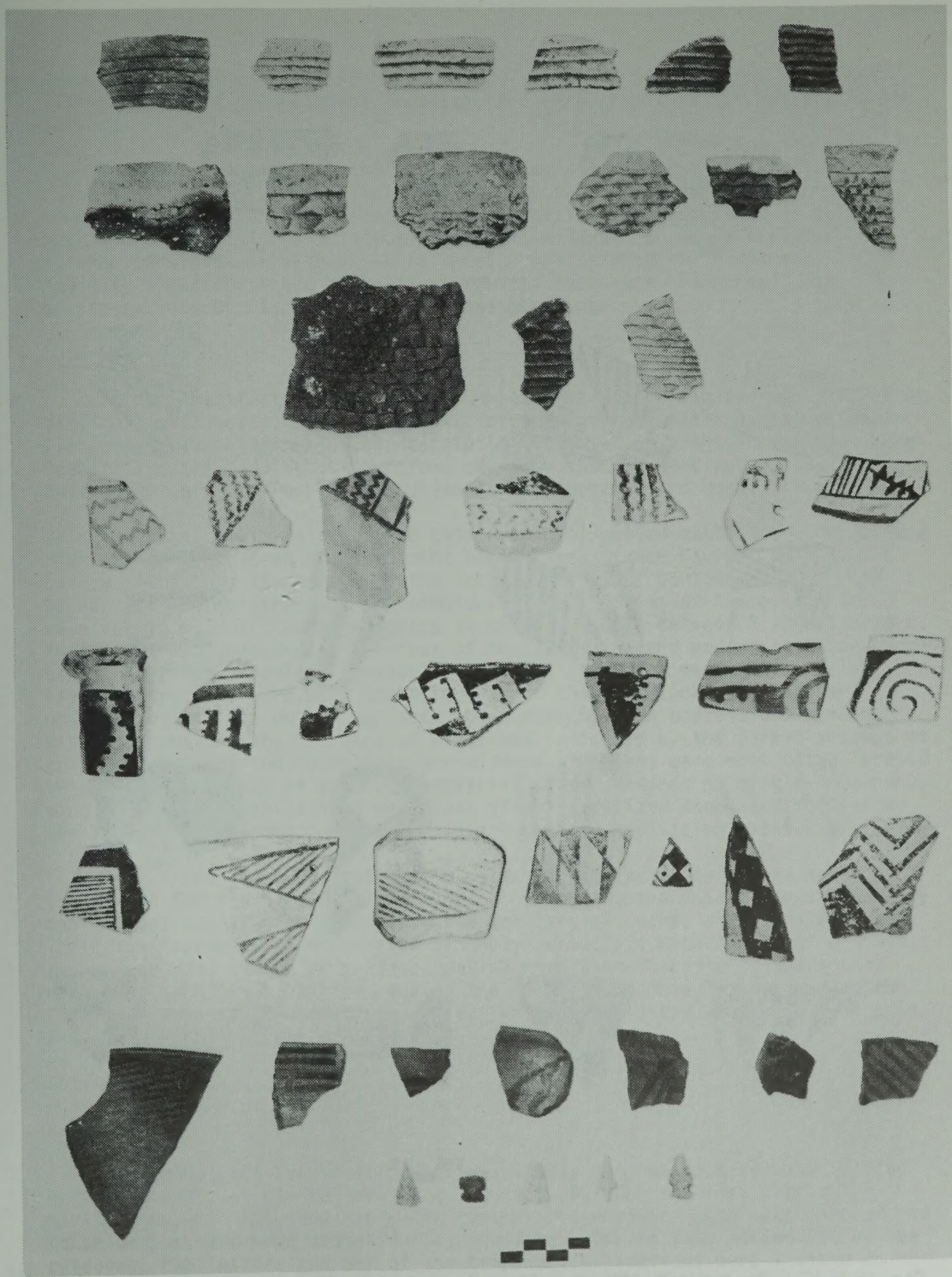

Figure 5-14. Photograph Illustrating an Early Pueblo II Ceramic Assemblage. Mancos Gray, top row; Mancos Corrugated; second row; Corrugated Body, third row; Cortez Black-on-white, fourth-fifth rows; Mancos Black-on-white, sixth row; Deadmans Black-on-red; bottom row.

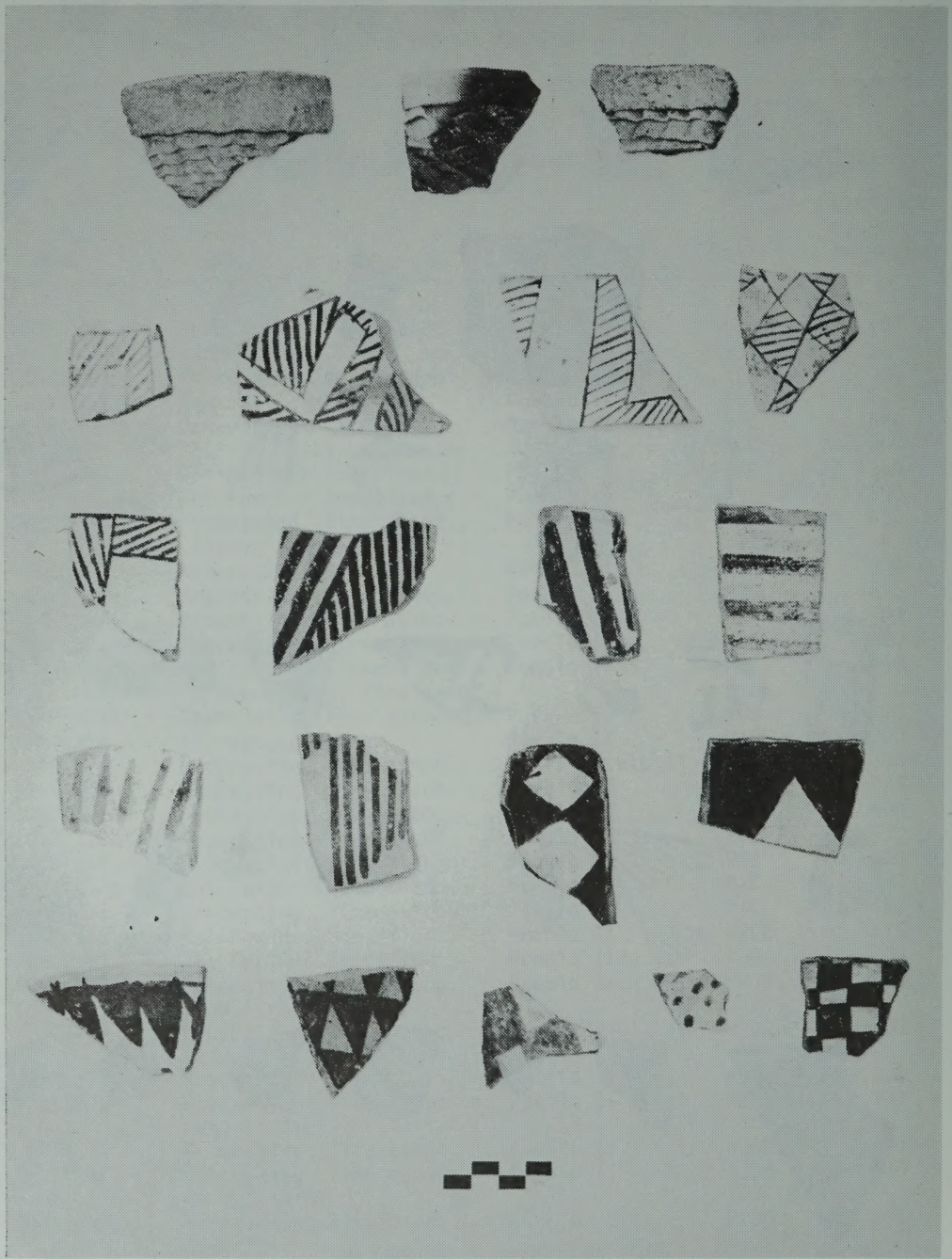

Figure 5-15. Photograph Illustrating a Late Pueblo II Ceramic Assemblage. Mancos Corrugated, top row; Mancos Black-on-white, bottom four rows.

filled with post-occupational deposits, and were therefore not visible on the surface.

Temporary habitations and activity areas of the Early Pueblo II period exhibited surface characteristics similar to those of other time periods. Temporary habitations consisted of either small surface scatters of burned rock and/or adobe in association with small middens, or smoke-stained rockshelters with or without walls in association with small middens. Activity areas consisted of cultural remains such as small burned rock concentrations or flaked or ground stone scatters.

Late Pueblo II

Surface manifestations of Late Pueblo II permanent habitations were often difficult to discern, since many (54%) of them were overlain by later Pueblo III components. The following description is based on single-occupation Late Pueblo II sites, and it is therefore possible that it does not reflect the full extent of Late Pueblo II architecture on Mockingbird Mesa.

Permanent habitations of the Late Pueblo II period exhibited more surface rock, in general, than did permanent habitations of the Early Pueblo II period. This was the result of the increasing use of horizontally coursed masonry in the construction of roomblocks. The remains of these roomblocks were rubble mounds linear or square in shape, usually between 3 and 12 meters in length, and composed of hundreds of mostly small- and medium-sized unshaped sandstone rocks. Besides horizontal masonry, jacal and megalithic upright slab construction were used to build some of the roomblocks. Kivas were usually not visible on the surface. On occasion, when depressions were not visible, however, the presence of kivas was indicated by the marked absence of artifacts between the roomblocks and middens. Middens were most often located to the south or east of the roomblock/kiva area. Middens on single-component, single-household habitations were less often vandalized than were middens on the larger, multi-component or multiple household habitation sites.

Only three temporary habitation sites (and no activity areas) were identified for the Late Pueblo II period on Mockingbird Mesa. These temporary habitations appeared as sparse surface scatters of rocks, sherds, and flakes. Their low frequency of occurrence probably reflects a methodological problem associated with dating of surface remains more than it reflects the actual number of such sites utilized during the period; undoubtedly a number of the Pueblo II temporary habitations and activity areas listed in Table 5-4 are in fact Late Pueblo II period sites.

Settlement Patterns

Pueblo II

Throughout the Pueblo II period, virtually the entire mesa was utilized by the Anasazi, as can be seen from Figure 5-16. For the most part, habitations were situated along the central ridge of the mesa where soils tend to be deepest and best suited for agriculture. During this period 70% of the permanent habitations and 58% of the temporary habitations were located on R-class soils. The average distance between any two closest permanent habitations was 231 meters with a standard deviation of 129 meters. As can be seen from Figure 5-16, temporary habitations and activity areas tended to be

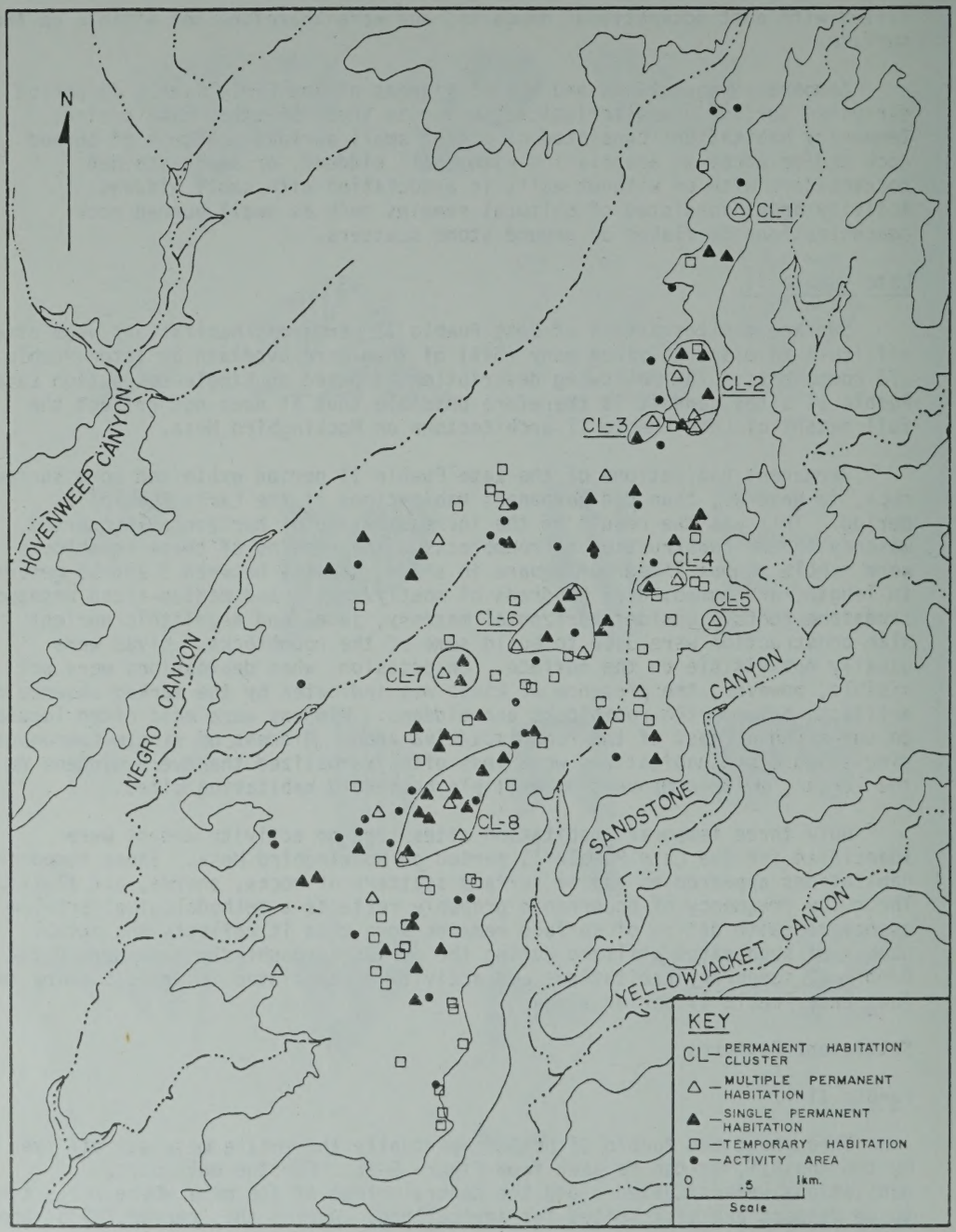

Figure 5-16. Map Illustrating the Distribution of all Pueblo II Sites on Mockingbird Mesa.

situated in areas surrounding the permanent habitations. This settlement pattern suggests social as well as spatial associations of temporary habitations and activity areas with nearby permanent habitations.

Early Pueblo II

During the Early Pueblo II period, sites were situated mostly along the central ridge of Mockingbird Mesa. The fact that 83% of all permanent habitations were located on R-class soils indicates that the Early Pueblo II peoples preferred settlement on the mesa top in areas of deep and arable soils. The location of these sites on deep soils might also be associated with the construction of below-ground kivas and the extensive use of adobe in building surface rooms.

A tendency for clustering of habitations is indicated in both the cluster analysis illustrated in Figure 5-17 and in the value of the nearest neighbor statistic calculated for Early Pueblo II permanent habitations. The cluster analysis was conducted using the average of 252 meters between closest habitation sites plus one standard deviation of 175 meters. The value for nearest neighbor statistic was calculated to be 0.86, which represents a slight tendency towards clustering (using a formula given by Kane [1983] and originally described by Clark and Evans [1954]).

During this period, the Anasazi lived in communities composed of mostly small permanent habitations. The majority (72%) of habitations are estimated to have contained single households, and even the multiple household habitations are estimated to have contained only two households each. Between the years AD 900 - 1000 approximately 66 households are thought to have occupied Mockingbird Mesa.

Late Pueblo II

During the Late Pueblo II period a majority of permanent habitations continued to be situated along the top of Mockingbird Mesa, as can be seen from Figure 5-18. However, in addition to this continued use of the mesa top, an increase occurred in the use of the mesa margins. This is indicated by the fact that 46% of all Late Pueblo II permanent habitations were now located on M-class soils, as compared to only 18% during the Early Pueblo II time period.

Seven clusters of permanent habitations were identified for the Late Pueblo II period, based on an average distance of 357 meters between closest habitation sites plus one standard deviation of 189 meters. While this cluster analysis mathematically identified seven clusters, the value calculated for nearest neighbor statistic, 1.085, suggests that Late Pueblo II sites are randomly distributed; in other words they exhibit no statistical tendency for either clustering or even spacing.

Reflecting a pattern seen in the Early Pueblo II period, the majority (65%) of Late Pueblo II habitations contained single households. However, compared to Early Pueblo II, proportionately more people were now living in multiple household habitations. This is shown by the fact that (1) multiple household habitations now constituted 35% of all permanent habitations (up from only 28% during Early Pueblo II), and (2) the largest habitations now housed as many as six households each. A total of 72 households are estimated to have occupied Mockingbird Mesa between the years AD 1000 - 1100.

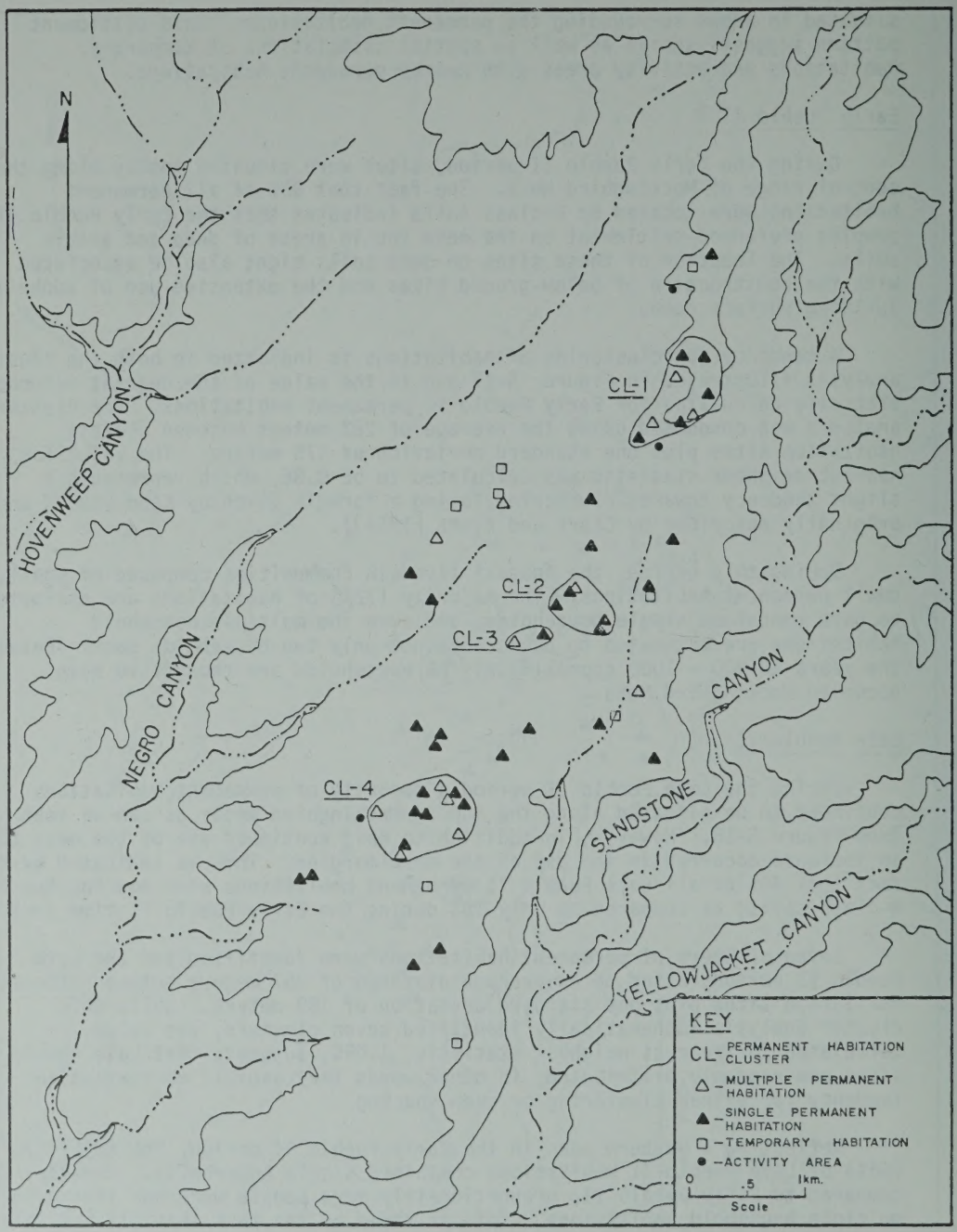

Figure 5-17. Map Illustrating the Distribution of Early Pueblo II Sites on Mockingbird Mesa.

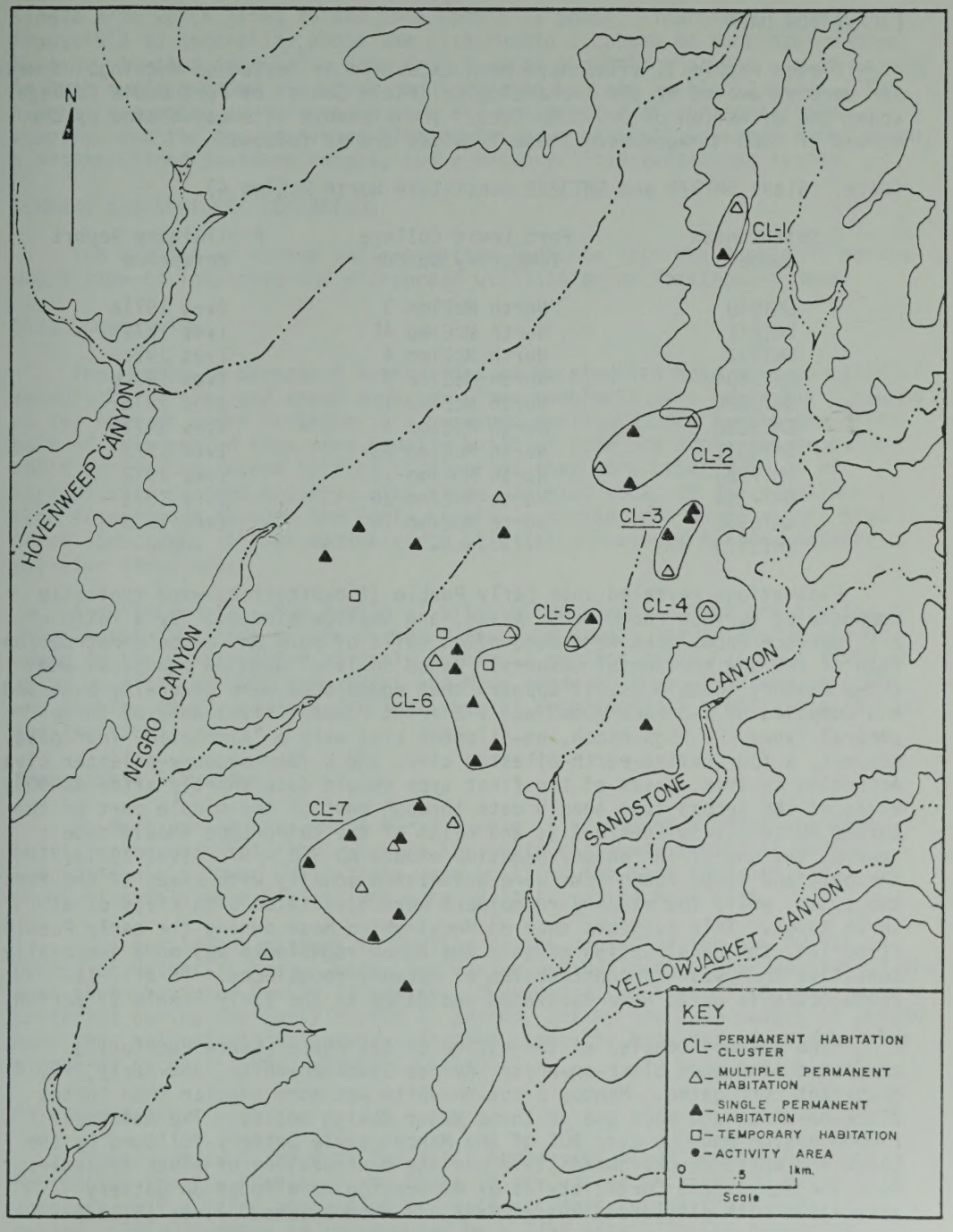

Figure 5-18. Map Illustrating the Distribution of Late Pueblo II Sites on Mockingbird Mesa.

EXCAVATION DATA

Eleven Pueblo II sites have been excavated or tested on Mockingbird Mesa. Ten were excavated by the Archaeological Field School of Fort Lewis College under the direction of Dr. John Ives. The eleventh site was tested by the Bureau of Land Management. These 11 sites are as follows:

(Note: Sites 5MT972 and 5MT3232 constitute North McElmo 4).

Smithsonian Number	Fort Lewis College Temporary Number	Preliminary Report Reference
5MT948	North McElmo 3	Ives 1971a
5MT971	North McElmo 4E	Ives 1971b
5MT972	North McElmo 4	Ives 1971b
5MT1604	North McElmo 2	Ives 1971b
5MT1624	North McElmo 12	Ives 1972
5MT3232	North McElmo 4	Ives 1971b
5MT5011	North McElmo 20	Ives 1973
5MT7323	North McElmo 14	Ives 1972
5MT7354	North McElmo 16	Ives 1973
5MT8565	North McElmo 18	Ives 1973
5MT3173	----------	-none-

Excavations revealed that Early Pueblo II habitations were typically composed of surface roomblocks, kivas, and shallow middens. By a ratio of 2:1, surface roomblocks were more often built of pole and adobe construction than of coursed horizontal masonry. Based on Ives' data on one jacal and three masonry roomblocks, it appears that roomblocks were generally L-shaped and composed of 2-3 back rooms and 1-2 front rooms. Kivas were of three general types: a high-bench, no-pilaster kiva with a "simulated" four-post support, a four-native-earth-pilaster kiva, and a four-masonry-pilaster kiva. According to Ives, kivas of the first type should date shortly after AD 900; kivas of the second type should date through most of the middle part of the Cortez Phase [Early Pueblo II]; and kivas of the third type should date towards the end of the phase, sometime around AD 960 - 975 (Ives 1971a:7). The pole and adobe roomblocks were associated equally with kivas of the first two types, while the masonry roomblocks were associated with kivas of all three types. This suggests that on Mockingbird Mesa during the early Pueblo II period, the construction of pole and adobe roomblocks was more temporally sensitive than was the construction of masonry roomblocks. In all, 11 roomblock/kiva units were excavated and dated to the Early Pueblo II period.

"The pottery complex of the entire Cortez Phase [Early Pueblo II] consisted of Mancos Black-on-white, Cortez Black-on-white, and early, exuberant corrugated. Mancos Black-on-white was more popular than Cortez Black-on-white and made use of three major design motifs. The hatchered ribbon design made up over 90% of the Mancos style pottery followed by the black and white checkerboard style and the manipulation of black triangles. Both the Mancos and Cortez styles of decoration were found on pottery associated with all Cortez Phase kivas and room blocks." (Ives 1971a:5).

Compared to the 11 excavated roomblock/kiva units which dated to the Early Pueblo II phase, no complete roomblock/kiva unit was excavated on any

single site which dated to the Late Pueblo II phase. Therefore it is impossible to generalize about the Late Pueblo II phase on Mockingbird Mesa. However, limited excavation data from 2 sites suggests that the use of masonry in both surface rooms and kivas had increased by Late Pueblo II times. The several excavated surface rooms were all constructed of horizontal slab masonry, and the one excavated kiva contained a partially-masonry lined bench, a masonry-lined southern recess, and a masonry-lined ventilator system.

SUMMARY AND REGIONAL COMPARISON

The results of survey and excavation indicate that the Pueblo II period was a time of intensive and widespread utilization of Mockingbird Mesa.

Site Composition

The Pueblo II permanent habitations on Mockingbird Mesa were composed of roomblocks, kivas, and trash middens. The roomblocks were generally composed of two rows of rooms arranged in a L-shaped configuration; during the first half of this period they were usually built of pole and adobe construction, while during the second half of this period they were usually built of horizontally coursed masonry. The kivas, located south of the roomblocks, were transformed through the Early Pueblo II period from no-pilaster, high bench structures to four-native-earth pilaster structures to four masonry pilaster structures.

Architecturally, the Pueblo II sites of Mockingbird Mesa are similar to other Pueblo II sites in the Northern San Juan Area. The extensive use of adobe in the construction of Early Pueblo II surface rooms has been found on sites on Alkali Ridge (Brew 1946) and Mesa Verde (O'Bryan 1950 and Lancaster and Pinkley 1954), as have similar types of architectural transitions in kiva construction.

Topographic Situation

On Mockingbird Mesa, most Early Pueblo II permanent habitations were built in the mesa interior. During the subsequent Late Pueblo II period, proportionately fewer habitations were built on the mesa interior and proportionately more habitations were built along the mesa edge.

This settlement pattern is similar to the one noted for the Pueblo II period on Wetherill Mesa. There, increasing use was made of the margins of the mesa throughout the Pueblo II period. The central portion of the mesa was preferred during the Early Pueblo II period, but by the late Pueblo II period more than half of all sites were situated along the margins and on the talus slopes of Wetherill Mesa (Hayes 1964:109).

Paleodemography

If one compares the data for total numbers of sites, components, and households for the Pueblo II and Pueblo I periods on Mockingbird Mesa, it is apparent that a large population increase occurred during the Pueblo II period. This increase is represented by a 375% growth in the number of households between the Pueblo I and Pueblo II periods. The greatest rate of growth occurred between the Late Pueblo I and Early Pueblo II periods, when the number of households increased by 560%. These tremendously rapid

increases were probably due in small part to in situ population growth and in large part to population influxes from outside areas.

In many places in the northern San Juan Area a large Pueblo II population increase is reflected in large numbers of Pueblo II sites. On Mesa Verde a three-fold increase is seen between sites of the Piedra Phase (Pueblo I) and those of the Ackmen Phase (Early Pueblo II) (Smith 1985: 158). Similar findings have been documented for the Hovenweep area (Winter 1976), the San Juan Resource Area, (Chandler et al. 1980), Alkali Ridge (Honeycutt and Fetterman 1985), and Chaco Canyon (Reher 1977).

In contrast and undoubtedly related to some of these findings are the prehistoric population figures for the Dolores River Valley. Here populations peaked during the Pueblo I period and drastically declined thereafter (Schlanger 1985). It therefore seems probable that many of the Pueblo II habitation sites found on the mesas west of the Dolores River Valley (Mockingbird Mesa included) were the homes of immigrants who came from the Dolores River Valley.

Pueblo III: AD 1100 - 1300

SURVEY DATA

Introduction

The Pueblo III period was the time of maximum Anasazi population and utilization of Mockingbird Mesa. This is represented by the 186 temporal components identified for this period. More than half (96) of these components were classified as loci of permanent habitation, while less than one-quarter (42) were classified as loci of temporary habitation and approximately one-quarter (48) were classified as loci of limited activity. Table 5-5 presents data on the temporal components assigned to the Pueblo III time period.

Dating

Temporal components were assigned to this time period primarily on the basis of their ceramic assemblages. Since the diagnostic ceramic types of this period are McElmo Black-on-white, Mesa Verde Black-on-white, Dolores Corrugated, and Mesa Verde Corrugated, all components assigned to this period had ceramic assemblages which contained at least one of these four types. On sites which contained large ceramic assemblages, the dates of components could usually be further refined to either the Early Pueblo III or the Late Pueblo III period. The Early Pueblo III period (AD 1100 - 1200) was defined on the basis of a ceramic assemblage which contained McElmo Black-on-white and Dolores Corrugated sherds. An example of this ceramic assemblage is illustrated in Figure 5-19. The Late Pueblo III period (AD 1200 - 1300) was defined on the basis of a ceramic assemblage which contained Mesa Verde Black-on-white and Mesa Verde Corrugated sherds. An example of this ceramic assemblage is illustrated in Figure 5-20.

Surface Manifestations

Permanent Habitations

On Mockingbird Mesa, surface manifestations of permanent habitations consisted primarily of sizable rock mounds from collapsed masonry structures and copious amounts of cultural debris. For the most part, permanent habitations contained three elements: the remains of masonry surface rooms (rubble mounds); the remains of subterranean kivas (depressions); and the remains of trash middens (artifact concentrations). In general, these three elements were arranged within sites in a consistent fashion, with the rooms on the north, the kivas immediately to the south or southeast, and the trash middens to the south, southeast, and southwest. Deviations from this general north-south arrangement were occasionally made to conform with topographical settings such as canyon head and talus slope locations.

Table 5-5. Pueblo III Sites on Mockingbird Mesa.

PERMANENT HABITATIONS

Site Number	Habitation Type	Time Period	Number of Households	Soil	Distance to Spring in Meters
5MT0930B	Multiple	Early Pueblo III	2	ROB	800
5MT0948D	Multiple	Early Pueblo III	2	ROB	875
5MT0950	Multiple	Late Pueblo III	2	M2DD	350
5MT0952A	Single	Early Pueblo III	1	R7D	350
5MT0952B	Single	Late Pueblo III	1	R7D	350
5MT0953A	Multiple	Early Pueblo III	2	M2CE	0
5MT0953B	Multiple	Late Pueblo III	2	M2CE	0
5MT0970B	Multiple	Early Pueblo III	2	ROC	600
5MT0970D	Multiple	Late Pueblo III	2	ROC	600
5MT0998B	Single	Early Pueblo III	1	M2DD	600
5MT0998C	Single	Late Pueblo III	1	M2DD	600
5MT0999B	Single	Early Pueblo III	1	ROC	325
5MT0999C	Single	Late Pueblo III	1	ROC	325
5MT1000	Multiple	Late Pueblo III	20	M2CE	0
5MT1512	Multiple	Late Pueblo III	8	M2CE	0
5MT1531B	Multiple	Early Pueblo III	3	ROC	650
5MT1531D	Multiple	Late Pueblo III	3	ROC	650
5MT1541A	Multiple	Early Pueblo III	15	ROC	400
5MT1541B	Multiple	Late Pueblo III	15	ROC	400
5MT1544B	Multiple	Early Pueblo III	6	M2CE	1,100
5MT1544C	Multiple	Late Pueblo III	6	M2CE	1,100
5MT1548B	Single	Early Pueblo III	1	M2DD	340
5MT1548C	Single	Late Pueblo III	1	M2DD	340
5MT1549A	Multiple	Early Pueblo III	3	R4D	1,000
5MT1549B	Multiple	Late Pueblo III	3	R4D	1,000
5MT1550A	Multiple	Early Pueblo III	4	M2CE	1,300
5MT1550B	Multiple	Late Pueblo III	4	M2CE	1,300
5MT1561B	Single	Late Pueblo III	1	M2C	1,200
5MT1583C	Single	Early Pueblo III	1	R4C	600
5MT1583D	Single	Late Pueblo III	1	R4C	600
5MT1595	Multiple	Late Pueblo III	10	M2CE	50
5MT1598A	Single	Late Pueblo III	2	M2DD	175
5MT1598C	Multiple	Early Pueblo III	2	M2DD	175
5MT1599B	Multiple	Early Pueblo III	2	M2DD	0
5MT1599C	Multiple	Late Pueblo III	2	M2DD	0
5MT1601B	Multiple	Early Pueblo III	2	ROC	400
5MT1602	Multiple	Early Pueblo III	2	ROB	625
5MT1606B	Single	Early Pueblo III	1	ROB	275
5MT1606C	Single	Late Pueblo III	1	ROB	275
5MT1607A	Multiple	Early Pueblo III	3	ROB	700
5MT1607B	Multiple	Late Pueblo III	3	ROB	700
5MT1609B	Multiple	Early Pueblo III	2	ROB	600

Table 5-5. Pueblo III Sites on Mockingbird Mesa (continued).

PERMANENT HABITATIONS (continued)

Site Number	Habitation Type	Time Period	Number of Households	Soil	Distance to Spring in Meters
5MT1609C	Multiple	Late Pueblo III	2	ROB	600
5MT1610	Multiple	Early Pueblo III	2	M2DD	720
5MT1619A	Multiple	Early Pueblo III	2	M2C	950
5MT1619B	Multiple	Late Pueblo III	2	M2C	950
5MT1622	Multiple	Late Pueblo III	4	M2C	400
5MT1626B	Single	Early Pueblo III	1	M2DD	150
5MT3059	Multiple	Late Pueblo III	2	R4D	750
5MT3060A	Multiple	Early Pueblo III	2	R4D	750
5MT3060B	Multiple	Late Pueblo III	2	R4D	750
5MT3083A	Multiple	Early Pueblo III	2	R4D	300
5MT3083B	Multiple	Late Pueblo III	2	R4D	300
5MT3217	Single	Early Pueblo III	2	ROC	800
5MT3291	Single	Late Pueblo III	1	M2DD	75
5MT3303B	Multiple	Early Pueblo III	2	M2DD	175
5MT3303C	Multiple	Late Pueblo III	2	M2DD	175
5MT3322B	Single	Early Pueblo III	1	M2DD	1,400
5MT3322C	Single	Late Pueblo III	1	M2DD	1,400
5MT4386	Single	Late Pueblo III	1	M2DD	100
5MT4993B	Multiple	Early Pueblo III	2	ROB	400
5MT4993C	Multiple	Late Pueblo III	2	ROB	400
5MT5001	Multiple	Early Pueblo III	2	M2DD	250
5MT5823A	Single	Early Pueblo III	1	ROB	475
5MT5823B	Single	Late Pueblo III	1	ROB	475
5MT6967B	Multiple	Early Pueblo III	6	M2DD	350
5MT6967C	Multiple	Late Pueblo III	6	M2DD	350
5MT7284A	Single	Early Pueblo III	1	M2C	900
5MT7284B	Single	Late Pueblo III	1	M2C	900
5MT7292C	Single	Early Pueblo III	1	M2C	250
5MT7292D	Single	Late Pueblo III	1	M2C	250
5MT7313	Single	Early Pueblo III	1	R7D	800
5MT7337B	Multiple	Early Pueblo III	4	M2C	550
5MT7337C	Multiple	Late Pueblo III	4	M2C	550
5MT7345A	Single	Early Pueblo III	1	ROB	1,000
5MT7345B	Single	Late Pueblo III	1	ROB	1,000
5MT7354D	Multiple	Early Pueblo III	2	M2CE	50
5MT7354E	Multiple	Late Pueblo III	2	M2CE	50

Table 5-5. Pueblo III Sites on Mockingbird Mesa (continued).

PERMANENT HABITATIONS (concluded)

Site Number	Habitation Type	Time Period	Number of Households	Soil	Distance to Spring in Meters
5MT7356A	Single	Early Pueblo III	1	R7D	700
5MT7356B	Single	Late Pueblo III	1	R7D	700
5MT7360E	Single	Early Pueblo III	1	M2C	1,000
5MT7360F	Single	Late Pueblo III	1	M2C	1,000
5MT7371	Single	Late Pueblo III	1	M2C	400
5MT7372A	Multiple	Early Pueblo III	4	M2CE	1,175
5MT7372B	Multiple	Late Pueblo III	4	M2CE	1,175
5MT7395	Multiple	Late Pueblo III	2	M2CE	0
5MT7400B	Multiple	Early Pueblo III	4	M2C	850
5MT7400C	Multiple	Late Pueblo III	4	M2C	850
5MT7405B	Multiple	Early Pueblo III	6	M2C	900
5MT7405C	Multiple	Late Pueblo III	6	M2C	900
5MT8534A	Multiple	Early Pueblo III	2	M2CE	730
5MT8534B	Multiple	Late Pueblo III	2	M2CE	730
5MT8554	Multiple	Late Pueblo III	2	M2C	400
5MT8581	Single	Early Pueblo III	1	M2DD	650
5MT8774B	Multiple	Early Pueblo III	6	M2C	800
5MT8774C	Multiple	Late Pueblo III	6	M2C	800

TEMPORARY HABITATIONS

Site Number	Habitation Type	Time Period	Soil	Distance to Spring in Meters
5MT0967	Temporary Habitation	Pueblo III	M2CE	800
5MT0969A	Temporary Habitation	Pueblo III	ROC	600
5MT1554B	Temporary Habitation	Early Pueblo III	R4D	600
5MT3054	Temporary Habitation	Pueblo III	R4D	825
5MT3064	Fieldhouse	Pueblo III	R4D	625
5MT3100	Fieldhouse	Early Pueblo III	R7D	500
5MT3123	Fieldhouse	Early Pueblo III	M2DD	1,200
5MT3124	Temporary Habitation	Pueblo III	M2CE	1,300
5MT3142	Temporary Habitation	Pueblo III	M2C	420
5MT3143	Temporary Habitation	Pueblo III	M2C	400
5MT3144	Temporary Habitation	Pueblo III	M2C	350
5MT3159	Temporary Habitation	Pueblo III	M2DD	300
5MT3166	Temporary Habitation	Pueblo III	M2DD	500

Figure 5-5. Pueblo III Sites on Mockingbird Mesa (continued).

TEMPORARY HABITATIONS (concluded)

Site Number	Habitation Type	Time Period	Soil	Distance to Spring in Meters
5MT3173D	Temporary Habitation	Pueblo III	R4C	200
5MT3187	Fieldhouse	Early Pueblo III	R7D	300
5MT3199	Temporary Habitation	Late Pueblo III	M2CE	300
5MT3201	Temporary Habitation	Late Pueblo III	M2CE	300
5MT3205	Temporary Habitation	Early Pueblo III	M2CE	200
5MT3219	Temporary Habitation	Pueblo III	M2C	900
5MT3226	Fieldhouse	Pueblo III	ROC	600
5MT3230	Fieldhouse	Pueblo III	ROC	600
5MT3266	Fieldhouse	Pueblo III	M2C	650
5MT3267	Fieldhouse	Pueblo III	M2C	625
5MT3276	Fieldhouse	Pueblo III	M2DD	700
5MT3287B	Temporary Habitation	Late Pueblo III	ROC	300
5MT3292	Fieldhouse	Pueblo III	M2DD	80
5MT3308	Fieldhouse	Pueblo III	M2DD	300
5MT6746C	Temporary Habitation	Early Pueblo III	ROC	250
5MT7293B	Temporary Habitation	Pueblo III	M2DD	275
5MT7296B	Fieldhouse	Early Pueblo III	ROC	675
5MT7338	Temporary Habitation	Pueblo III	M2C	650
5MT7341	Fieldhouse	Pueblo III	R4D	725
5MT7352	Temporary Habitation	Pueblo III	M2CE	800
5MT7366	Temporary Habitation	Pueblo III	M2DD	1,100
5MT7367	Temporary Habitation	Pueblo III	M2C	950
5MT7397	Fieldhouse	Pueblo III	M2DD	700
5MT7402	Temporary Habitation	Pueblo III	M2CE	800
5MT7407	Temporary Habitation?	Pueblo III	R4D	1,300
5MT8551	Temporary Habitation	Early Pueblo III	M2CE	300
5MT8552B	Temporary Habitation	Pueblo III	M2DD	400
5MT8556	Temporary Habitation	Pueblo III	M2C	300
5MT8578	Temporary Habitation	Early Pueblo III	M2DD	980

Figure 5-5. Pueblo III Sites on Mockingbird Mesa (continued).

ACTIVITY AREAS

Site Number	Activity Area Type	Time Period	Soil	Distance to Spring in Meters
5MT0968	Processing, fire assoc., lithic, and vegetal	Pueblo III	M2DD	600
5MT0969B	Processing, fire assoc.	Late Pueblo III	M2DD	600
5MT1515B	Processing, lithic	Pueblo III	M2CE	500
5MT1593	Storage, granary	Pueblo III	M2CE	520
5MT3019	Not further specified	Late Pueblo III	V3C	900
5MT3022	Not further specified	Pueblo III	R4D	925
5MT3033	Storage, granary	Pueblo III	M2CE	425
5MT3034	Ceremonial, tower?	Pueblo III	M2CE	400
5MT3037	Processing, fire assoc. and lithic	Late Pueblo III	M2DD	700
5MT3050C	Not further specified	Pueblo III	M2DD	500
5MT3058	Processing, fire assoc.	Pueblo III	ROC	800
5MT3090B	Processing, fire assoc. and lithic	Pueblo III	M2CE	50
5MT3136	Processing, fire assoc.	Late Pueblo III	M2DD	670
5MT3147B	Processing, fire assoc.	Pueblo III	ROC	580
5MT3148	Processing, fire assoc.	Pueblo III	ROC	500
5MT3158	Processing, fire assoc.	Pueblo III	ROC	400
5MT3167B	Not further specified	Pueblo III	ROC	600
5MT3190	Ceremonial, shrine and Processing, fire assoc.	Pueblo III	ROC	200
5MT3197B	Processing, fire assoc.	Pueblo III	R7D	300
5MT3203	Not further specified	Pueblo III	M2CE	40
5MT3229	Not further specified	Pueblo III	R4C	300
5MT3231B	Not further specified	Pueblo III	ROC	800
5MT3235	Processing, fire assoc.	Pueblo III	ROC	900
5MT3253	Processing, fire assoc.	Pueblo III	R7D	900
5MT3255B	Processing, fire assoc.	Pueblo III	ROC	650
5MT3258	Processing, fire assoc. and Agricultural, check dam	Pueblo III	M2CE	610
5MT3272	Not further specified	Pueblo III	M2C	700
5MT3273	Processing, fire assoc.	Pueblo III	R4C	275
5MT3297	Processing, fire assoc.	Pueblo III	ROC	340
5MT3298	Processing, fire assoc. and Agricultural, check dam	Pueblo III	M2DD	200
5MT3300	Processing, fire assoc.	Pueblo III	ROC	140
5MT3301	Processing, fire assoc.	Pueblo III	ROC	350
5MT3317	Not further specified	Early Pueblo III	ROD	600
5MT3325	Ceremonial, stone rectangle	Late Pueblo III	M2DD	1,200

Figure 5-5. Pueblo III Sites on Mockingbird Mesa (concluded).

ACTIVITY AREAS (concluded)

Site Number	Activity Area Type	Time Period	Soil	Distance to Spring in Meters
5MT6825	Agricultural, check dam	Pueblo III	R7D	300
5MT7290	Processing, fire assoc.	Late Pueblo III	M2C	350
5MT7339	Processing, fire assoc.	Pueblo III	M2C	700
5MT7380	Not further specified	Pueblo III	M2CE	1,260
5MT7396	Processing, fire assoc.	Pueblo III	M2CE	900
5MT7398	Storage, granary	Pueblo III	M2CE	600
5MT8457	Processing, fire assoc.	Early Pueblo III	M2DD	325
5MT8461	Processing, fire assoc.	Pueblo III	M2DD	400
5MT8466	Processing, fire assoc.	Pueblo III	M2DD	450
5MT8536	Agricultural, field marker	Pueblo III	ROB	650
5MT8558	Storage, granary and Processing, vegetal	Pueblo III	M2CE	500
5MT8561	Storage, granary	Pueblo III	M2CE	50
5MT8575	Processing, fire assoc.	Pueblo III	M2DD	1,100
5MT8577	Processing, fire assoc. and lithic	Pueblo III	M2DD	1,150

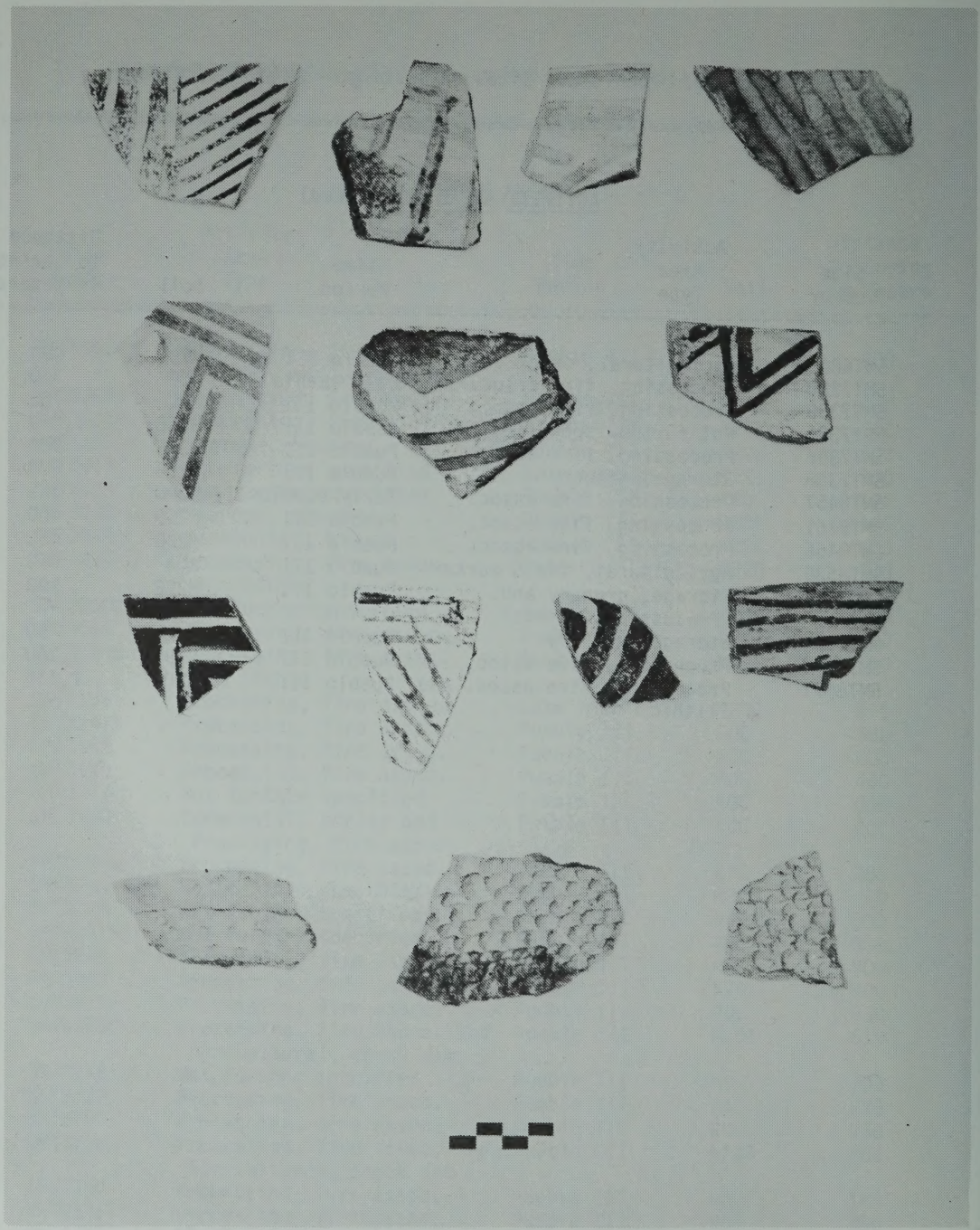

Figure 5-19. Photograph Illustrating an Early Pueblo III Ceramic Assemblage. McElmo Black-on-white, top three rows; Dolores Corrugated, bottom row

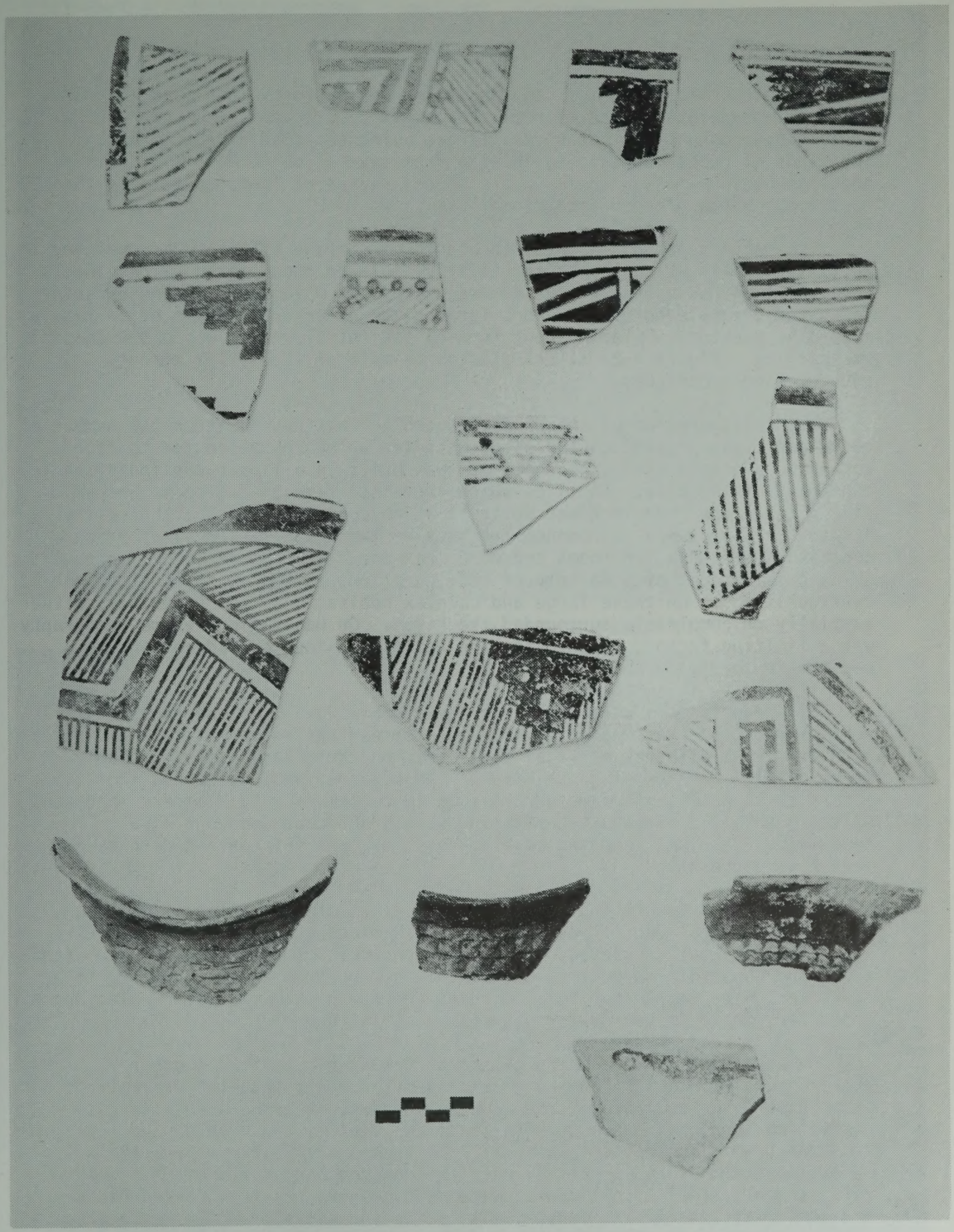

Figure 5-20. Photograph Illustrating a Late Pueblo III Ceramic Assemblage. Mesa Verde Black-on-white, top three rows; Mesa Verde Corrugated, bottom row.

Since Pueblo III times, the upper courses of most of the surface rooms have collapsed into mounds of rock rubble, as illustrated in Figure 5-21. These rubble mounds are often very large, being composed of hundreds to thousands of rocks and ranging in size from several cubic meters to several thousand cubic meters. These rubble mounds represent from two to more than 20 contiguous rooms grouped into roomblocks.

The masonry techniques used to construct surface rooms can be observed in the intact walls which are occasionally visible on these sites. These walls were built of horizontally-coursed masonry blocks with interior and exterior faces and a rubble core. The rock forming the exterior face was often finely shaped by pecking, while the rock forming the interior face was often shaped by spalling. Figure 5-22 illustrates an example of Pueblo III masonry construction techniques.

The configuration of the surface roomblock was dependent on the number of rooms and kivas present on the site. On sites which contained two to four rooms and a single kiva, the roomblock was built in a linear configuration to the north of the kiva. On sites which contained five to ten rooms and a single kiva, the roomblock was built in a crescentric configuration, either "C" or "U" shaped and surrounded the kiva on three sides. On sites which contained more than ten rooms and more than one kiva, the roomblock was built using combinations of a variety of configurations including "U" and "E" shaped configurations. On these large and complex habitations, the roomblocks either partially or completely surrounded the kivas. On habitations where topography was a limiting factor, roomblocks were built in unique configurations to conform to the space available.

Kiva depressions were visible on most (85%) Pueblo III permanent habitations. The vast majority of these depressions represent the remains of regular kivas, although at least two, based on their large size, probably represent the remains of great kivas. The kiva depressions ranged from 3.5 meters to 15 meters in diameter and from 10 centimeters to 2 meters in depth. Of the Pueblo III permanent habitation sites, 48% contained one kiva depression, 22% contained two kiva depressions, and 15% contained three or more kiva depressions.

Defining the south and often the east sides of habitation sites were mounds of cultural debris representing trash middens. These mounds usually contained ashy soil, hundreds if not thousands of pot sherds, discarded stone tools and construction debris, and burials of the prehistoric inhabitants of the sites. The vast majority of middens are now pock-marked with holes dug by pothunters in their search for associated burial goods.

On approximately one-third of the permanent habitations another architectural element, the tower, is present. On all mesa-top habitations and most canyon-rim habitations, the towers are directly associated with the habitation complex and are usually found adjacent to the kiva depressions. On some canyon-rim habitations, however, the towers are distinct from the habitation complex and are isolated either on the canyon rim or on nearby talus-slope boulders. All towers were made of horizontally-coursed masonry and constitute the finest masonry visible on the sites.

Figure 5-21. Photograph Illustrating a Typical Pueblo III Rubble Mound.

Figure 5-22. Photograph Illustrating Pueblo III Masonry.

Temporary Habitations

Whether found in open settings or in rockshelter locations, the surface manifestations of temporary habitations were less apparent than those of permanent habitations. In open mesa-top setting, surface manifestations consisted of the remains of one to three rooms and a small amount of artifactual materials. In rockshelter locations surface manifestations consisted of either a smoke-stained roof or the remains of one to three rooms, in association with a small amount of artifactual materials. Surface manifestations indicate that various types of temporary habitations were constructed during this time period. In open mesa-top settings, some habitations were apparently substantial masonry structures, as indicated by the presence of mounds of large sandstone blocks, while other habitations were apparently insubstantial brush and rock structures, as indicated by the presence of scatters of small burned rocks. In rockshelter locations some temporary habitations contained well-made, hortizontally-coursed masonry walls laid in adobe and chinked with small stones, while other habitations contained crudely-made dry-laid masonry walls, and still others contained no walls at all.

Activity Areas

Surface manifestations of Pueblo III activity sites varied widely. Some of the most substantial were those of rock shelter graneries, composed of horizontally-coursed masonry walls which had been carefully laid with small amounts of mud mortar and chinking stones. Less substantial, but still often easily recognizable, were those of mesa-edge kilns, rectangular boxes outlined by burned upright sandstone slabs and filled with dark gray charcoal-stained soil. The least substantial of all were those of activities such as food or lithic processing, where surface remains consisted of small burned rock concentrations or sherd and lithic scatters.

Settlement Patterns

Pueblo III

Virtually every nook and cranny of Mockingbird Mesa appears to have been utilized by the Pueblo III peoples. This can be seen from Figure 5-23, which illustrates the distribution of all Pueblo III sites located on Mockingbird Mesa and the 11 habitation clusters identified for this time period. The clusters were identified using the cluster determinant figure of 470 meters, which is the sum of the average distance between two nearest habitations, 293 meters, plus one standard deviation, 176 meters.

Although it is evident from Figure 5-23 that Pueblo III people utilized the entire mesa, it is not so easily seen that they utilized the mesa margins to a greater extent that the mesa top. This is indicated by the fact that the majority of all Pueblo III sites are located on M-class soils. The use of the mesa margins applied not only to temporary habitations and activity areas, but also to permanent habitations, as 59% of all permanent habitations were located on M-class soils.

As can be seen from Figure 5-23, activity areas and temporary habitations occur throughout the mesa, both in areas surrounding permanent habitations and in areas containing no permanent habitations. In order to understand the

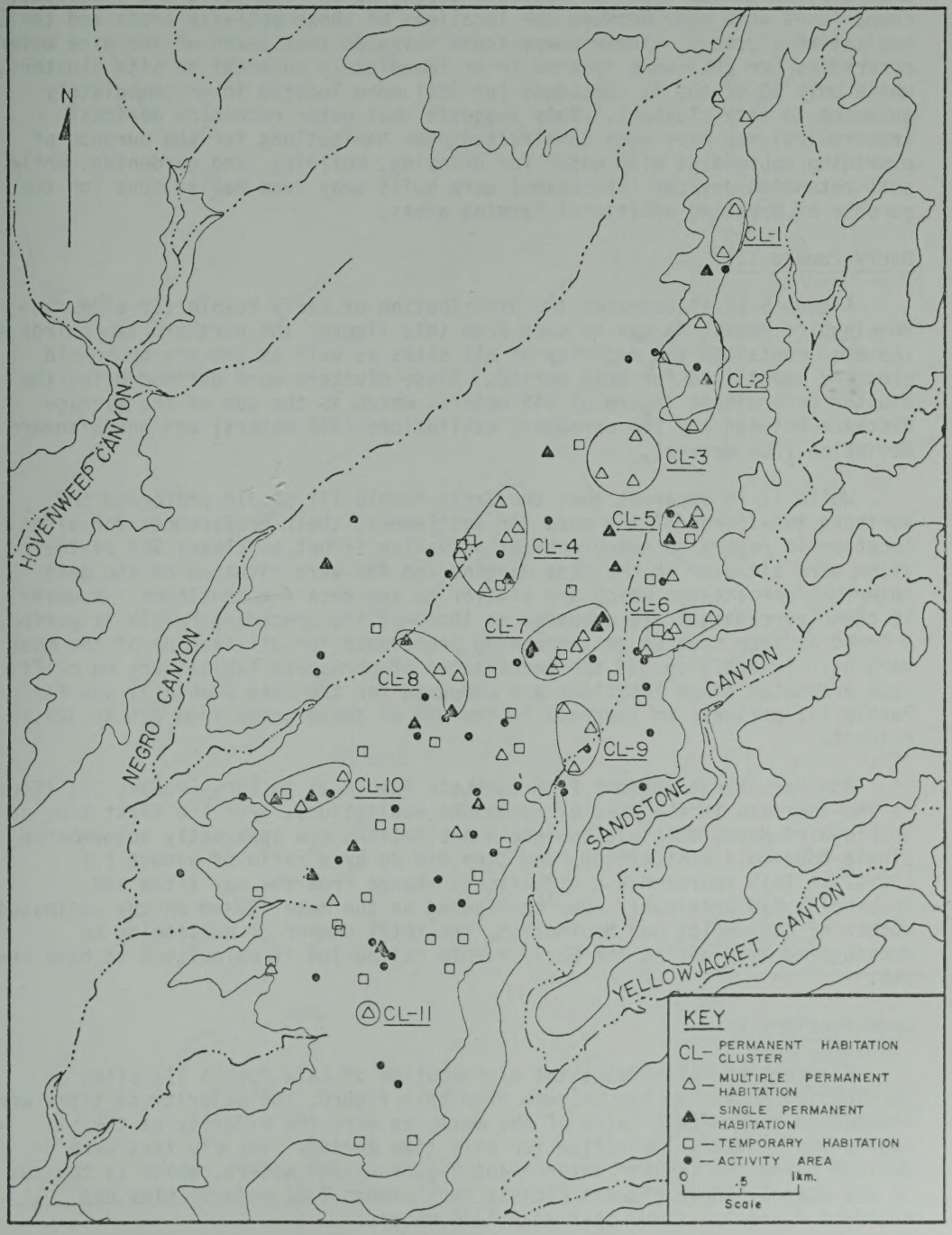

Figure 5-23. Map Illustrating the Distribution of all Pueblo III Sites on Mockingbird Mesa.

distribution of two types of activity areas, water reservoirs and checkdams, comparisons were made between the locations of these activity areas and the 11 habitation clusters. These comparisons revealed that seven of the nine water reservoirs (or 79%) were located in or immediately adjacent to site clusters, while only 10 of the 31 checkdams (or 32%) were located in or immediately adjacent to site clusters. This suggests that water retention devices (reservoirs) may have been constructed near habitations for the purpose of providing households with water for drinking, building, and gardening, while soil retention devices (checkdams) were built away from habitations for the purpose of creating additional farming areas.

Early Pueblo III

Figure 5-24 illustrates the distribution of Early Pueblo III sites on Mockingbird Mesa. As can be seen from this figure, the northern two-thirds of the mesa contained the majority of all sites as well as the six household clusters identified for this period. These clusters were defined using the cluster determinant figure of 549 meters, which is the sum of the average distance between any two permanent habitations (344 meters) and one standard deviation (205 meters).

While it is apparent that the Early Pueblo III people preferred the northern two-thirds of the mesa for settlement, their preferences for site location in regard to topographical situation is not so clear; 52% of their sites were situated on the mesa margins and 48% were situated on the mesa interior, percentages which are similar to the mesa's composition. However, if these percentages are compared to those of the preceding Pueblo II period, a trend is seen towards an increasing preference for utilization of the mesa margins. In addition, if the percentages of permanent habitations on cliff face and talus slope locations are compared for the Late Pueblo II and Early Pueblo III periods, an increase in the use of these areas from 22% to 32% is evident.

Another change evident from the Late Pueblo II to Early Pueblo III times is the increase in the size of permanent habitations. For the first time on Mockingbird Mesa, multiple household habitations now apparently outnumbered single household habitations, and they did so by a ratio of almost 2:1 (30:17). This represents a significant change from the way sites and households had previously been configured on the mesa. Based on the estimated number of households per habitation, the total number of households on Mockingbird Mesa during the Early Pueblo III period is calculated to have been 118.

Late Pueblo III

Figure 5-25 illustrates the distribution of Late Pueblo III sites on Mockingbird Mesa. As can be seen from this figure, the majority of sites were located in the central third of the mesa, as were the majority of the six habitation clusters identified for this time period. The clusters were defined using the cluster determinant figure of 559 meters, which is the sum of the mean distance between closest habitations (323 meters) plus one standard deviation about that mean (236 meters).

The preference for the mesa margins hinted at during the Early Pueblo III period becomes clearly evident in the Late Pueblo III period, with 66% of all

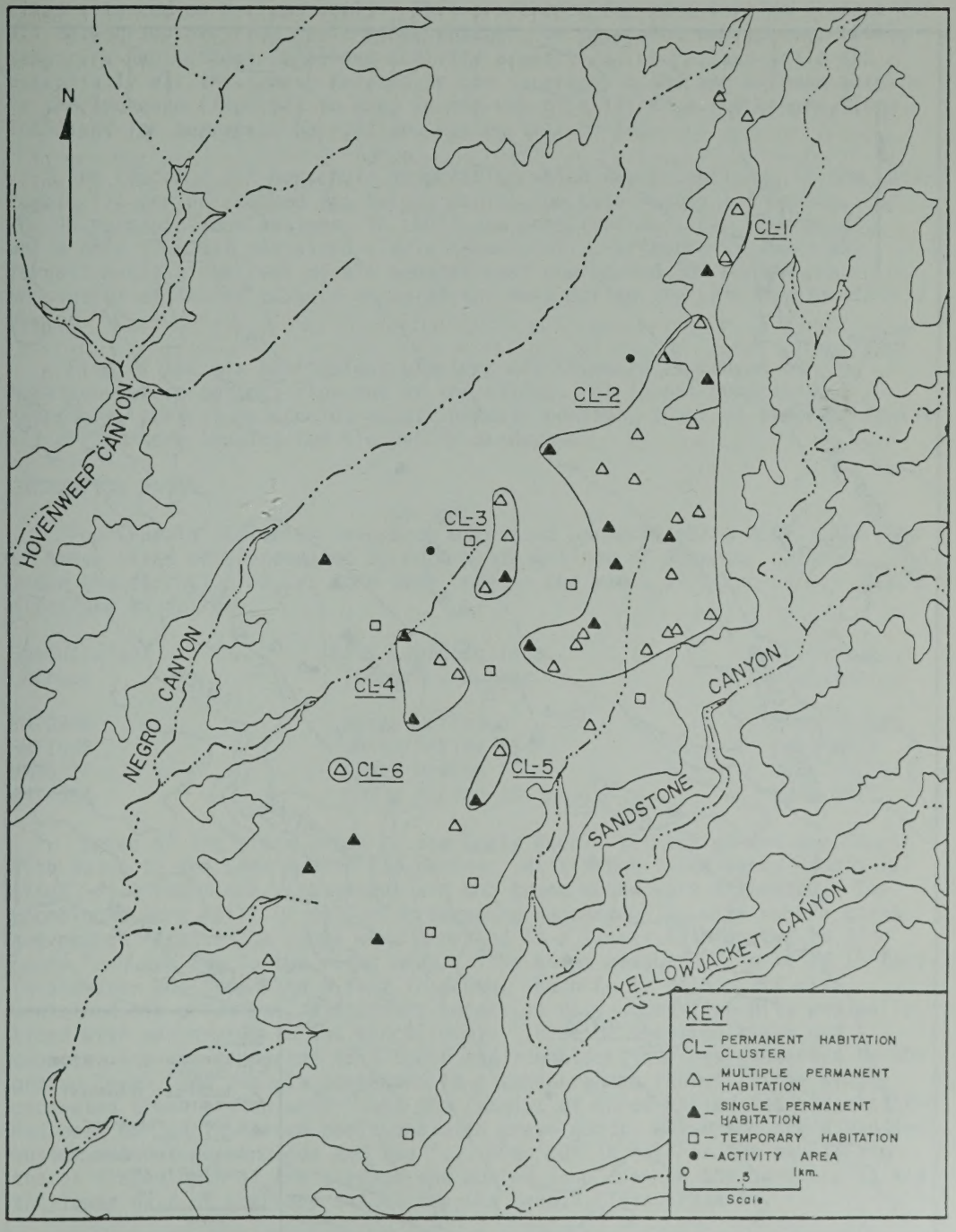

Figure 5-24. Map Illustrating the Distribution of Early Pueblo III Sites on Mockingbird Mesa.

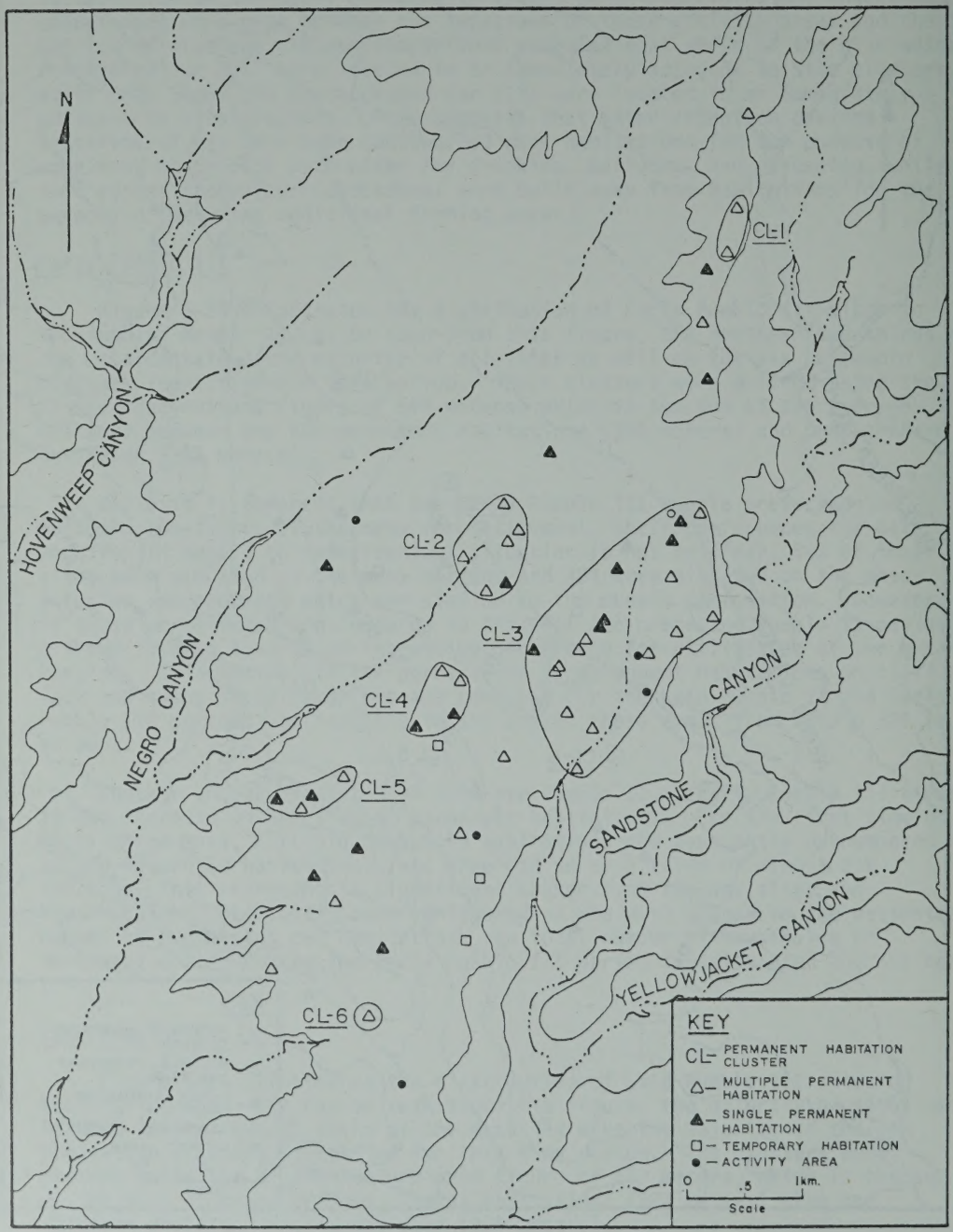

Figure 5-25. Map Illustrating the Distribution of Late Pueblo III Sites on Mockingbird Mesa.

sites situated on M-class soils. This preference for mesa margins is true for all categories of sites, as the percentages for permanent habitations (65%), temporary habitations (67%) and activity areas (67%) on M-class soils are essentially all the same. Related to the increase in the use of mesa margins is the increase (from 32% to 47%) in the use of cliff face and canyon slope locations for permanent habitations during this period.

The tendency for household aggregation which was established in the Early Pueblo III period reached its height during the Late Pueblo III period. Of the 49 permanent habitations, 32 (65%) now contained multiple households, while only 17 (35%) contained single households. Furthermore, the eight largest habitations (16% of all habitations) now housed 50% of the 155 households estimated to have occupied the mesa during the Late Pueblo III period.

Five of the six habitations clusters are situated at canyon head locations where springs flow out of the cliffs. It is not surprising, therefore, that of households of all Anasazi periods, those of the Late Pueblo III period were located the closest to springs.

EXCAVATION DATA

Four Pueblo III sites have been excavated on Mockingbird Mesa. All four of these sites were excavated by Fort Lewis College of Durango, Colorado, under the direction of Dr. John Ives between the years 1970 and 1973. These sites are as follows:

Smithsonian Number	Fort Lewis College Temporary Number	Publication Reference
5MT0948	North McElmo 3	Ives 1971a
5MT1602	North McElmo 13	Ives 1972
5MT3217	North McElmo 7	Ives 1971b
5MT7354	North McElmo 16	Ives 1973

Three of the sites dated to the Early Pueblo III period and the fourth site dated to the Late Pueblo III period. Within the three Early Pueblo III sites, five roomblock/kiva groups and one trash mound were excavated. The roomblocks were built of well-made compound masonry walls with rubble cores and pecked faces. The rooms were arranged in a linear fashion two to five rooms long and one to two rooms deep. The kivas measured from 14 to 15 feet in diameter and from 6 to 8 feet in depth. Each Early Pueblo III kiva contained six pilasters, a southern recess, a clay coped fire-pit, and walls lined with masonry up to the bench level. Three of the five kivas had tunnels; one was connected to a tower and roomblock, one was connected to the ground level, and one was connected to a subterranean room. In the single excavated trash midden were found the remains of three buried individuals: two had been buried in flexed positions with grave goods, while the third had been buried without grave goods and had "....been cut in half at the navel; the thorax flayed open at the sternum and buried face down in the burial pit; and the lower half of the body sat on top the head." (Ives 1971a:9)

The Late Pueblo III site was a small cliff-dwelling. Here a kiva and portions of several rooms were excavated. The kiva, shown in Figure 5-26, was a key-holed shaped kiva which measured 15 feet in diameter and 7 feet in

Figure 5-26. Photograph of an Excavated Late Pueblo III Kiva on Mockingbird Mesa. (From Ives 1973, Plate 13)

depth. It was fully masonry-lined and contained six tapered pilasters, a southern recess, and a tunnel which led to a roomblock.

SUMMARY AND REGIONAL COMPARISON

The data recovered from Mockingbird Mesa indicate that the Pueblo III time period marked both the height and the decline of Anasazi population on the mesa. Households were increasingly aggregated into large habitations which were more frequently located on shallow soils, near or at canyon rim and canyon head locations, and close to springs. Temporary habitations and activity areas of all kinds were more often than not located on shallow mesa slope soils, near canyon rims, or in cliff-face rockshelters.

Site Composition

On Mockingbird Mesa permanent habitations consisted of roomblocks, kivas, and middens. The roomblocks were composed of horizontally-coursed masonry rooms arranged in linear, "C", or "U" shaped configurations, or in combinations of these configurations. Kivas were key-hole shaped and masonry-lined and were often incorporated into the roomblocks. On large sites, towers were usually built as an integral part of the habitation complex.

Architecturally, the Pueblo III sites on Mockingbird Mesa are similar to Pueblo III sites throughout the northern San Juan Area. The similarity of these sites suggests that a cohesive social structure existed among the Pueblo III peoples of the area.

Topographical Situation

Sites of the Pueblo III time period occupy all areas of Mockingbird Mesa. A preference, however, is seen for the mesa margins compared to the mesa interior. By the late Pueblo III times, permanent habitations were commonly situated on cliff face and canyon head locations often close to springs.

The tendency for large Pueblo III habitation sites to be located along the margins of mesas near springs has been documented in a number of other areas north of the San Juan River. On nearby Cajon Mesa large habitations sites were built around canyonhead locations during Late Pueblo III times (Winters 1975:287). On Wetherill Mesa large Pueblo III communities were situated away from the mesa top on talus slopes and in caves in cliffs (Hayes 1964:109). On Chapin Mesa most habitation sites were located "closer to the rims of canyons than to the center of the mesa", and "increased numbers occupied situations on the talus slopes, both at cliff bases and in the canyon heads" (Rohn 1977:241-243). Most of these Pueblo III habitations were located nearer to water sources than were habitations of earlier periods (Ibid:249).

Paleodemography

For the Anasazi, the Pueblo III period was both the time of greatest occupation and the time of abandonment of Mockingbird Mesa. The data suggest that the population increased continuously until the end of the Late Pueblo III period, when the population dropped to virtually nothing; in other words, there is no evidence for a gradual abandonment of Mockingbird Mesa.

Throughout the northern San Juan basin, the Late Pueblo III period marked the final period of Anasazi occupation of the area. In a few places, such as Chapin Mesa (Rohn 1975), populations appear to have peaked in the Late Pueblo III period, while in many places, including Wetherill Mesa (Hayes 1975), the Upper Animas River Valley (Gooding 1980), and the Dolores River Valley (Schlanger 1985) populations appear to have peaked during earlier periods. It can therefore be seen that Mockingbird Mesa was probably one of the last homes of the Anasazi in the Northern San Juan Area.

Historic: AD 1880 - 1935

SURVEY DATA

Introduction

In comparison with the Anasazi time period, Mockingbird Mesa saw relatively little use during the Historic time period. This limited historic utilization is represented by ten temporal components, data on which is presented in Table 5-6.

Table 5-6. Historic Sites on Mockingbird Mesa.

Site Number	Site Type	Cultural Affiliation	Soil	Distance to Spring in Meters
5MT0932B	Tower?	Anglo American	R7D	500
5MT3052	Permanent Habitation	Anglo American	R4D	950
5MT3057B	Hunting Blind	Unknown	M2C	850
5MT3081	Well	Anglo American	R4D	400
5MT3086	Temporary Habitation	Unknown	R4D	150
5MT3093	Brush Fence	Unknown	M2DD	350
5MT3094	Temporary Habitation	Unknown	M2CE	350
5MT3097	Well	Anglo American	M2CE	140
5MT3256	Rock Cache	Anglo American	ROC	825
5MT7289A	Sweathouse	Native American	R4D	550

Dating

Temporal components were dated to the Historic time period based on the presence of diagnostic artifact assemblages or architectural elements. The artifact assemblages consisted primarily of tin cans, glass or ceramics fragments, and pieces of rubber or leather. The architectural elements consisted of the remains of historic structures and features.

Surface Manifestations

Permanent Habitations

Surface manifestations of the single Historic permanent habitation consisted of the remains of a dugout, a cistern, and several small corrals. These were the remains of the Glass Homestead, which was filed upon in 1932 and cancelled in 1939. The dugout, illustrated in Figure 5-27, was lined with sandstone blocks removed from nearby Anasazi sites. East of the dugout was the cistern, a cement-lined hole dug into the ground approximately 1.75 meters deep. Associated with the homestead were several corrals and brush fences, and a now-overgrown field which had once been cleared along the drainage east of the homestead.

Figure 5-27. Photograph Illustrating Dugout on Glass Homestead on Mockingbird Mesa.

Temporary Habitations

The two temporary habitations consist of a "lean-to" and a rockshelter. The lean-to, shown in Figure 5-28, consists of 6 sawed juniper poles leaning against a live juniper tree and one juniper pole resting on the ground. Morphologically, the lean-to appears to be similar to a possible Ute wickiup found on Johnson Mesa (Nickens 1982: 113), suggesting that this lean-to might be of Ute origin. If it is Ute in origin, however, it probably dates to the period after 1922, since found in direct association was a No. 2 sanitary-type can opened with a can opener. Also found in association were the remains of a hearth. The rockshelter habitation contained a wall made of dry-laid masonry, a wall of juniper logs, a hearth, and scatter of tin cans. The tin cans, of the sanitary-type, date the occupation past 1922.

Activity Areas

The activity areas had a variety of surface manifestations. The hunting blind was a dry-laid masonry wall approximately 0.5 meters in height and 2 meters in length. An even bigger structure was the brush fence, which measured approximately 2 meters in height by one-quarter-mile in length; it had been made by piling hundreds of cut tree limbs and dead trees between live trees, thus forming a tangled impenetrable thicket of vegetation. Of the three water wells, two were excavated holes measuring approximately 2 meters on a side by about 1 meter in depth and partially covered over by the collapsed remains of wooden tripods. The third well had never been finished and consisted of only an excavated hole and a cache of sandstone rubble. The sweathouse, illustrated in Figure 5-29, was probably of Navajo origin and was made of axe-cut juniper logs with a possible opening on the northeast side. A concentration of several fire-altered sandstone rocks was present inside the sweathouse on the north side.

Settlement Patterns

As can be seen from Figure 5-30, the historic utilization of Mockingbird Mesa was concentrated in the east-central portion of the mesa. This concentration suggests that most of these sites are associated with the Glass Homestead. Corroborating evidence for this association is the similarity in artifactual materials of the three habitations and the similarity in the construction of the brush fences.

The Glass homestead is situated in a small valley which contains the only V-class soil present in the Mockingbird Mesa project area. This soil is well-suited for agriculture, and was apparently cleared and cultivated by the occupants of the homestead.

EXCAVATION DATA

No historic sites have been excavated on Mockingbird Mesa.

Figure 5-28. Photograph Illustrating Historic Lean-to on Mockingbird Mesa.

Figure 5-29. Photograph Illustrating Historic Sweathouse on Mockingbird Mesa.

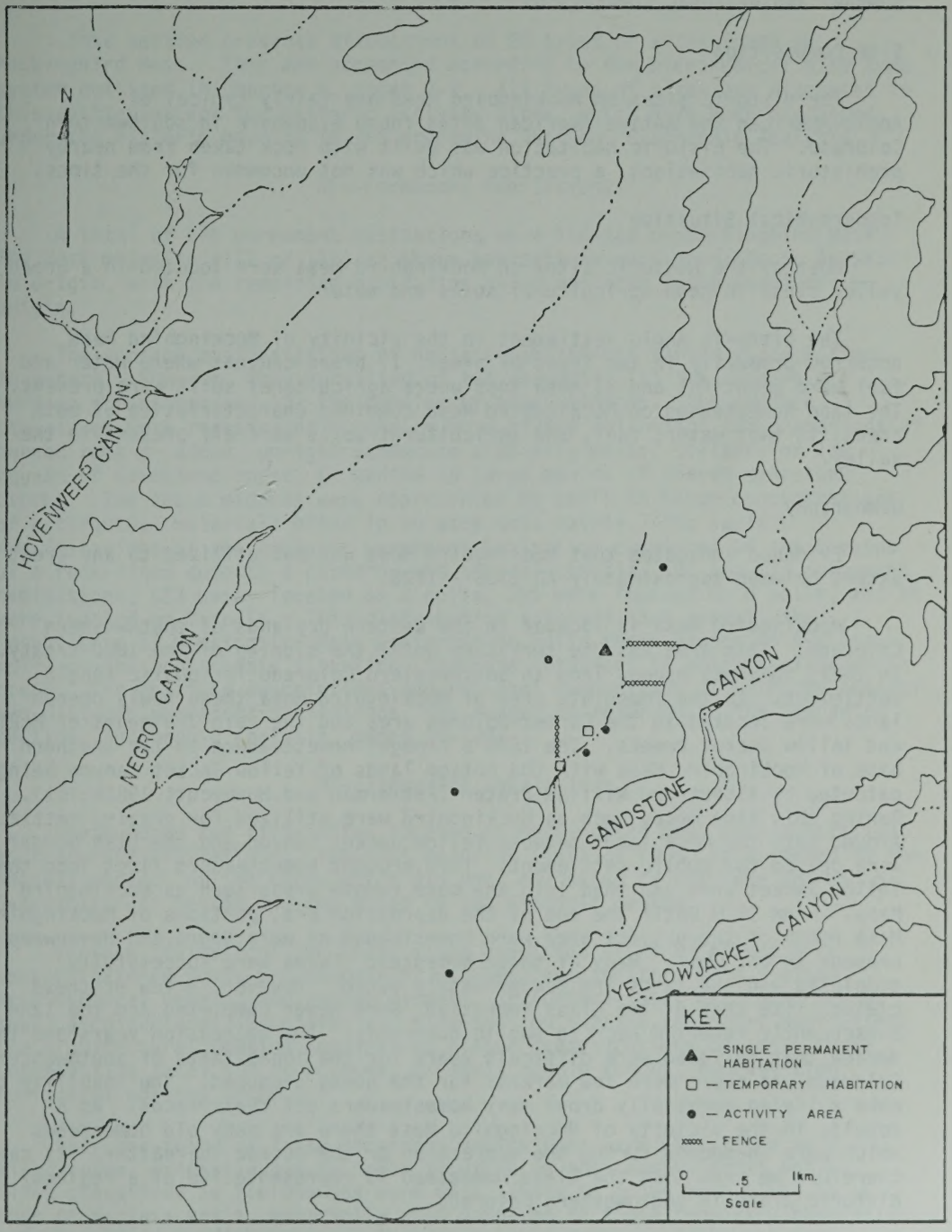

Figure 5-30. Map Illustrating the Distribution of all Historic Sites on Mockingbird Mesa.

SUMMARY AND REGIONAL COMPARISONS

Site Composition

The Historic sites on Mockingbird Mesa are fairly typical of Anglo-American and Native American sites found elsewhere in southwestern Colorado. The historic habitation was built with rock taken from nearby prehistoric habitations, a practice which was not uncommon for the times.

Topographical Situation

Most of the Historic sites on Mockingbird Mesa were located in a broad valley close to good agricultural soils and water.

The historic Anglo settlement in the vicinity of Mockingbird Mesa occurred primarily in two types of areas: 1) broad canyons where water and fuel were plentiful and 2) mesa tops where agricultural soils were present. The land homesteaded on Mockingbird Mesa combined characteristics of both areas, in that water, fuel, and agricultural soils were all present in the valley.

Demography

Evidence indicates that Mockingbird Mesa was not utilized to any great extent between approximately AD 1300 - 1920.

Mockingbird Mesa is located in the western drylands of southwestern Colorado. This area was Ute territory until the signing of the 1880 treaty. In 1882, Congress opened land in southwestern Colorado for public (Anglo) settlement. In the immediate area of Mockingbird Mesa these newly opened lands were located in the Cortez-Dolores area and the main drainages of McElmo and Yellow Jacket creeks. The 1890's brought homesteaders to the southern base of Mockingbird Mesa with the bottom lands of Yellow Jacket Canyon being patented by Albert and William Prater (Fetterman and Honeycutt 1982a:151). During this time mesas such as Mockingbird were utilized for grazing cattle. Around 1910 the mesa lands between Yellow Jacket Canyon and the Utah border were opened for public settlement. This brought homesteaders first into the Yellow Jacket area and then into the more remote areas such as Mockingbird Mesa. From 1910 until the end of the depression era, portions of Mockingbird Mesa north of the project area were homesteaded as were Negro and Hovenweep canyons to the west. Many of these homestead claims were successfully completed and the lands are now privately owned. However, a few of these claims, like that of the Glass Homestead, were never completed and the land subsequently reverted back to public ownership. The depression years and the decade that followed were difficult years for the inhabitants of southwestern Colorado, as there were few markets for the goods produced. The inability to make a living eventually drove many homesteaders off their lands. As a result, in the vicinity of Mockingbird Mesa there are many old homesteads which were abandoned during the depression or the decade thereafter. It can therefore be seen that the Glass Homestead is representative of a regional historic trend in southwestern Colorado.

SITE TYPE ANALYSIS

This section presents discussions of 20 types of sites found on Mockingbird Mesa. They are presented according to the hierarchical site type system outlined in Chapter 2, pages 7-9. All types of sites are discussed in this section except for Historic activity sites, which have been discussed under the Historic heading in the preceding section, Synchronic Analysis.

HP--Permanent Habitations

A total of 172 permanent habitations were located on Mockingbird Mesa. The vast majority (171 of 172) of these habitations were prehistoric Anasazi in origin, with the remaining habitation being historic Anglo-American in origin.

The surface manifestations of Anasazi habitations varied through time. In general, however, they consisted of two elements: (1) the remains of surface structures and (2) the remains of trash middens. The surface structures were represented by one or more of the following: concentrations of burned rock or adobe, upright sandstone slab alignments, scatters or low mounds of sandstone rocks, or medium to large mounds of shaped sandstone blocks. The trash middens were represented by small to large concentrations of artifactual materials often in an ashy soil matrix. The surface manifestations of the Historic permanent habitation consisted of the remains of a rock-lined dugout, a cistern, and several corrals. Of the 172 permanent habitations, 62% were located on R soils, 36% were located on M soils, and 1% were located on V soils. This distribution suggests that overall the inhabitants of Mockingbird Mesa preferred to build their houses on R-class soils or the topographic situation (the mesa interior) in which R-class soils occur. For detained descriptions and regional comparisons of both the Anasazi and Historic permanent habitations, the reader is referred to the preceding section, Synchronic Analysis, pages 35-100.

HT--Temporary Habitations

One hundred and fifty sites located on Mockingbird Mesa were classified as temporary habitations. The vast majority (147) of these sites dated to the Anasazi period; of the three which did not, one dated to the Late Archaic or Basketmaker II period and two dated to the Historic period.

Surface indications for these sites consisted of rockshelters with smoke-blackened roofs and associated middens, rockshelters with limited architectural remains and sparse middens, or surface sites with evidence of small architectural structures and middens. On surface temporary habitations the architectural remains appeared as either concentrations of small rocks, representing jacal and rock rooms, or small rubble mounds, representing horizontal masonry rooms.

Over one-third of these temporary habitations were classified as fieldhouses, primarily due to their location on good agricultural soils. Sites classified as fieldhouses were more likely to occur on R-class soils than on M-class soils, especially when compared to those temporary habitations not classified as fieldhouses. This is evident from the following data.

	R-class soil	M-class soil	Total
Temporary Habitation Not further specified	34 (35%)	62 (65%)	96
Temporary Habitation Fieldhouse	35 (65%)	19 (35%)	54

As can be seen above, fieldhouses were usually situated with regard to non-irrigated agricultural soils, such as those found on mesa tops. Interestingly, however, fieldhouses were usually not situated with regard to checkdams, as 87% of all fieldhouses were located more than 175 meters from the nearest checkdam site.

Regional Context

Within the Four Corners Region, Anasazi fieldhouses have been found in a number of locations, including Chapin Mesa (Rohn 1977), the Dolores River Valley (Wilshusen 1982), the Dolores Plateau (Honeycutt and Fetterman 1985b), the Montezuma Creek drainage (Brown 1984), Alkali Ridge (Honeycutt and Fetterman 1985a), and Elk Ridge (Greene and DeBloois 1978). In most of these locations fieldhouses were associated with arable lands, while on Chapin Mesa fieldhouses were associated with checkdams and farming terrace systems.

AA--Agricultural related activity areas

A total of 33 sites recorded on Mockingbird Mesa contained evidence of agricultural related activities. Of these, two were tentatively identified as field marker sites and 31 as checkdam sites.

The field markers consisted of small piles of unburned sandstone rocks situated on agricultural R-class soils. Excavation of one of these features revealed no subsurface remains (Fetterman and Honeycutt 1984).

Of the 31 sites which contained checkdams, 32% also contained permanent habitations, and 29% also contained either temporary habitations or other activity areas. Those checkdams which were associated with diagnostic cultural materials all dated to the Late Anasazi period, with the majority dating to the Pueblo III period. Since it was assumed that checkdams are a manifestation of an agricultural society and since the Anasazi are the only prehistoric agricultural society known to have occupied Mockingbird Mesa, all isolated checkdams without diagnostic materials were considered to be of Anasazi origin.

Unlike the checkdams of Mesa Verde, which number in the hundreds, are often in excellent condition, and occur in groups of up to 60, the checkdams of Mockingbird Mesa are generally small, in poor condition, and usually occur in groups of 3 or less. Many of the checkdams recorded were poorly preserved, consisting of only several rocks across a drainage. For this reason, it is possible that not all features recorded as checkdams are in fact checkdams or that not all checkdams that once existed were recorded.

The checkdams were found primarily in small intermittent drainages in the southern two-thirds of the mesa. Within this area, the distribution of

checkdams was fairly uniform, as 50% were located on R-class soils and 50% were located on M-class soils.

Three checkdams on one site have been tested on Mockingbird Mesa (Hammack 1984:83). These checkdams consisted of uncoursed alignments of large sandstone slabs lying directly on hardpan perpendicular to a small drainage. They range in length from 3.5 meters to 10 meters.

Checkdams created very little land for farming on Mockingbird Mesa. Each agricultural plot formed behind a single checkdam was probably no bigger than 8 by 20 meters in size. Using this liberal estimate and an average of 2.2 checkdams per site, the total arable acreage formed by the checkdams on Mockingbird Mesa is calculated to be 2.7 acres. Based on ethnographic evidence, this amount of land would support one individual for a year.

Regional Comparisons

Anasazi checkdams have been recorded in a number of locations in the Northern San Juan Area, including Wetherill Mesa (Hayes 1964) Chapin Mesa (Rohn 1977), and Cajon Mesa (Winter 1977, Honeycutt and Fetterman 1982). Evidence obtained from both testing and replicative experiments indicate that prehistoric checkdams were built to catch eroding soils as they moved down drainages. Once the soil had accumulated to sufficient depths behind the dams, the resulting terraces were then farmed intensively as agricultural plots which were occasionally flood-irrigated by summer rains (Winters 1977:196).

ACA--Rock Art Sites

No isolated rock art sites were located on Mockingbird Mesa. However, rock art, in the form of petrographs, was recorded on six Anasazi sites: three permanent habitations, two temporary habitations, and one granary/vegetal processing site. All six sites were located on the talus slopes of Mockingbird where cliffs, rockshelters, or boulders served as the locations for the rock art. Five of the sites dated to the Pueblo III period while the sixth site dated to the Pueblo II period. The following table presents data concerning the petrographs located on Mockingbird Mesa.

	No. of Panels	Type of Petrograph	No. of Elements	No. of Anthropomorphs	No. of Geometric Designs	No. of Curvilinear Designs
5MT1595	2	Petroglyph	4	2	0	2
5MT1622	1	Petroglyph	1	0	0	1
5MT7400	1	Petroglyph	2	1	0	1
5MT8551	1	Petroglyph	1	0	0	1
5MT8558	1	Pictograph	2	0	0	2
5MT8580	2	Petroglyph	8	2	0	6
		Pictograph	1	0	1	0

Anthropomorphs

Four of the five anthropomorphs are stick figures, while the fifth anthropomorph is a naturalistic figure. These five anthropomorphs are illustrated in Figure 5-31. As can be seen from this figure one and possibly

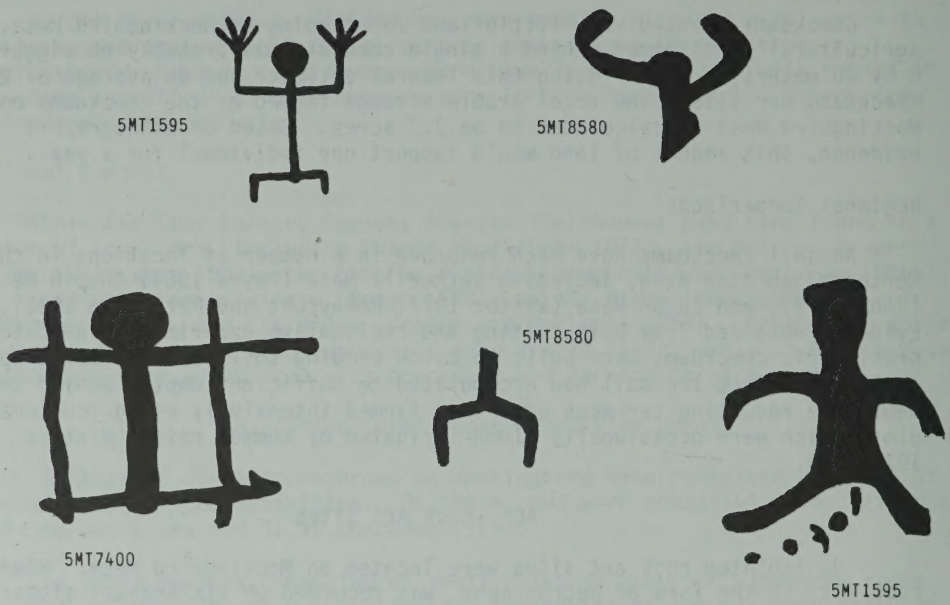

Figure 5-31. Illustration of Anthropomorphic Figures from Mockingbird Mesa.

two of the anthropomorphs may represent males.

Geometric Designs

The one geometric design found on Mockingbird Mesa was the possible depiction of a Late Anasazi pottery design.

Curvilinear Designs

Curvilinear designs were the most frequently found element on Mockingbird rock art panels. Curvilinear designs included a two-lobed bar and a clockwise spiral.

Regional Comparisons

Anasazi rock art has been documented in many locations in the Four Corners Region, including Yellow Jacket Canyon and Hovenweep (Olsen 1977), Mesa Verde (Fetterman 1976), the Dolores River Valley (Ives 1981), and Glen Canyon (Turner 1963). The stylistic similarities of Mockingbird Mesa's anthropomorphs with Style 3 (Late Anasazi) anthropomorphs in Glen Canyon corroborates the Late Anasazi date which was assigned to the Mockingbird Mesa rock art sites.

ACC--Stone Circles

Four stone circles (5MT1612, 5MT3304, 5MT7361, 5MT7387) were found on Mockingbird Mesa. These stone circles are made of crudely coursed sandstone blocks and slabs, usually shaped but not pecked. They average approximately 4 meters in diameter and stand 1 to 5 courses high. As can be seen from Figure 5-32, the small amount of rubble surrounding the circles suggests that these structures were never more than about a meter in height.

Artifactual material in the vicinity of the circles was sparse and no artifacts were found which could be reliably associated with any of the structures. Based on the masonry style of the structures, however, all four were dated to the Late Anasazi time period.

All four circles were situated on bedrock overlooking broad canyons or valleys. These stone circles appeared to have been associated with Pueblo III communities, as all four were located in or near Pueblo III permanent habitation site clusters. The location of these structures, and their size, shape, method of construction, and general absence of artifacts suggests that these stone circles were possibly ceremonial in nature.

Regional Comparisons

Stone circles have been found in several locations north of the San Juan River; in Utah they have been found in Montezuma Canyon and on Cedar Mesa (Haase 1983) while in Colorado they have been found in and along the rim of Yellow Jacket Canyon (Honeycutt and Fetterman 1982), in Negro Canyon (Chandler et al 1980), on Wetherill Mesa (Hayes 1964:112), and along the rim of Johnson Canyon (Windes 1978:58). Stone circles have also been found south of the San Juan River in Chaco Canyon. Windes (1976:65-69), through his excavations of stone circles at Chaco, believes that they are 1) primarily a Chacoan phenomenon and 2) probably associated with Bonita Phase towns, great kivas,

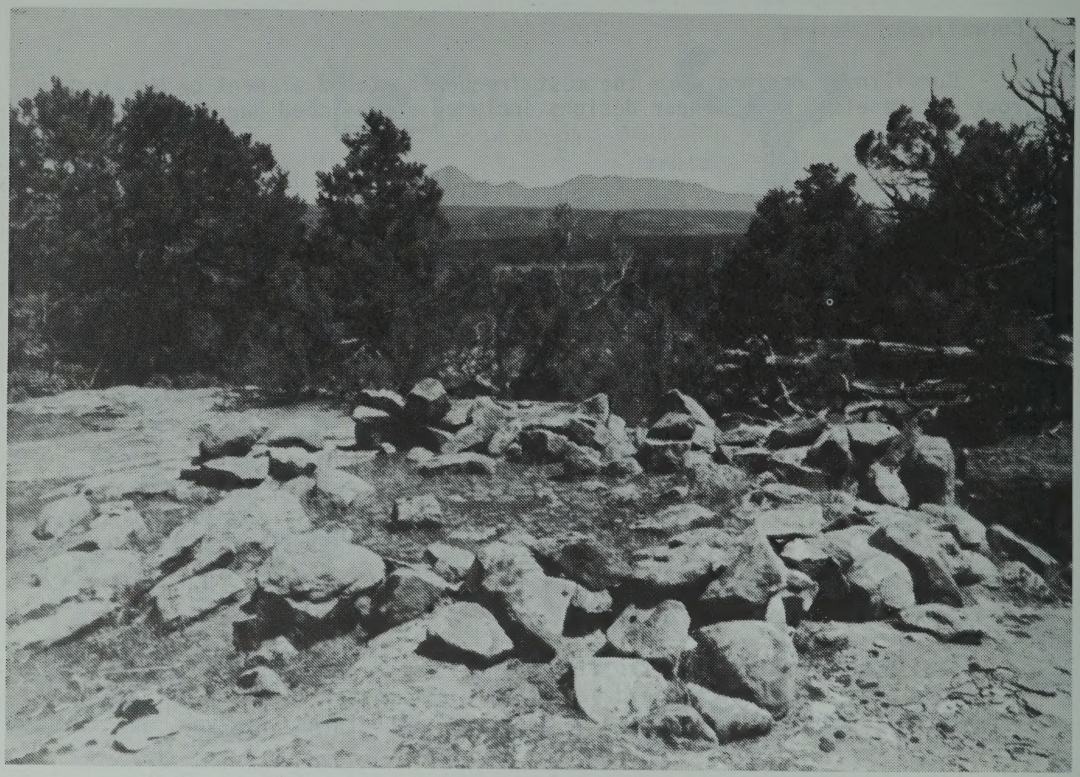

Figure 5-32. Photograph Illustrating a Stone Circle on Mockingbird Mesa.

and possibly shrines.

If we use Windes' Chacoan-centrist supposition that stone circles are primarily a Chacoan phenomenon, it indicates that much of the Northern San Juan area, including Mockingbird Mesa, was associated with the Chacoan phenomenon. While this is possible, the authors of this report suggest that the stone circles might actually be an "Anasazi phenomenon" that occurs in the Northern San Juan Area as well as the Chacoan area.

ACR--Stone Rectangle Sites

Two enigmatic sites, 5MT3325 and 5MT6768, located on Mockingbird Mesa fit into this category. Both of these sites are the remains of large rectangular isolated buildings made of horizontal masonry and apparently never roofed. One of the structures has standing compound walls of spalled dry-laid masonry up to 1.5 meters in height and 0.5 meters in thickness. These walls define a rectangular structure approximately 8 meters long on the south and north sides and 6 meters long on the east and west sides. The northeast corner of the structure is missing, with no fallen rubble to suggest it ever existed. Intriguingly, however, on the north end of the east wall is one-half of a "T"-shaped doorway (see Figure 5-33). The other stone rectangle site consists of the remains of walls of both horizontal masonry and megalithic slab construction. These remains define a rectangle 12 meters long and 5 meters wide, and indicate that this structure was never more than 1 meter in height.

Both of these structures are situated on canyon rims overlooking expansive canyons. One is located at the southern tip of Mockingbird Mesa, overlooking Yellow Jacket Canyon, and the other is located on the northern side of one of the western spurs of Mockingbird Mesa, overlooking Negro Canyon. In these isolated locations, both sites are well removed from any cluster of permanent habitations. Based on a very limited ceramic assemblage, and on masonry and architectural styles, the two structures were dated to the Pueblo III and Late Anasazi time periods respectively. The function of these sites is not known, but their striking topographical settings and limited artifact assemblages suggest that they served as lookout posts or ceremonial sites.

A third structure on Mockingbird Mesa might also be a stone rectangle or perhaps a tower. This isolated structure, consisting of a square rubble mound 5 meters on a side, is situated on top of a boulder in the bottom of a side canyon which leads from Mockingbird Mesa to Yellow Jacket Canyon. This structure is difficult, if not impossible, to reach without a ladder, as the boulder is over 30 foot tall and wider around its middle than its base. The location of the structure atop this boulder provides an excellent view of Yellow Jacket Canyon, approximately 2 miles to the south, and the canyon rims of Mockingbird Mesa to the east and west.

Regional Comparisons

Only a few sites similar to these stone rectangles have been reported in the literature of the Southwest. One, Site 1545, was located on Wetherill Mesa and may have had ceremonial or religious significance (Hayes 1964:114). Somewhat similar structures have also been found along the margins of Chaco Canyon. Compared to the Mockingbird sites, the Chaco structures are

Figure 5-33. Photograph Illustrating a Stone Rectangle on Mockingbird Mesa.

apparently similar in topographic setting, size, shape and construction, but are dissimilar in that they are consistently associated with exotic artifacts made of turquoise, azurite, and malachite (Kincaid et al 1983:9-20,21).

ACS--Shrines

Two sites, 5MT3190 and 5MT3206, located on Mockingbird Mesa contain features thought to be prehistoric shrines. Each shrine was composed of a large sandstone slab resting on top of or near two parallel upright sandstone slabs which were set 60 to 75 centimeters apart. The two sites were situated within 700 meters of each other on the eastern slope of Mockingbird Mesa. One was located in the open, while the other was located in a small, very low rock overhang (see Figure 5-34).

Regional Comparisons

Similar shrines have been located on Chapin Mesa (Rohn 1977) and Alkali Ridge (Honeycutt and Fetterman 1985a). This type of shrine has been termed by Rohn as an alcove shrine (Rohn 1977:112).

APC--Clay Processing Areas

Only one clay processing area (5MT3121) was found on Mockingbird Mesa. This processing area was a clay quarry located in a rock shelter on the southern end of the mesa. Along the back wall of the rock shelter was exposed a lens of Burro Canyon Formation clay while in front of the shelter was a large quartzite core which was apparently used as a digging tool.

Regional Comparisons

Very few clay quarries have been recorded in the Northern San Juan Basin, perhaps due to the fact that clay exposures usually occur on steep eroded slopes. The only other prehistoric clay quarry known to the authors is one located in Yellow Jacket Canyon in a rock shelter below site 5MT3 (J. Wheat, personal communication).

APF--Fire-Associated Processing Areas

It is difficult to walk anywhere on Mockingbird Mesa without encountering some type of fire-associated processing area. This was the most commonly located type of site on Mockingbird Mesa with 238 of the 420 total activity areas containing fire-associated processing areas.

The assumed function of these areas was the processing of organic and inorganic materials with heat obtained from fire. Based on surface evidence it was usually impossible to determine what types of materials had been processed and thus difficult to assign specific function to these features. However, on a few sites, based on surface morphological attributes, it was possible to determine what types of materials had been processed and thus these sites were assigned one of two specific functions: (APFK) pottery kiln and (APFR) roasting pit or hearth.

Surface indications of a fire-associated processing area consisted of either an ash-and-charcoal stain, a pile of thermally-altered rocks, or an alignment of thermally-altered slabs. Over half (136) of the fire-processing

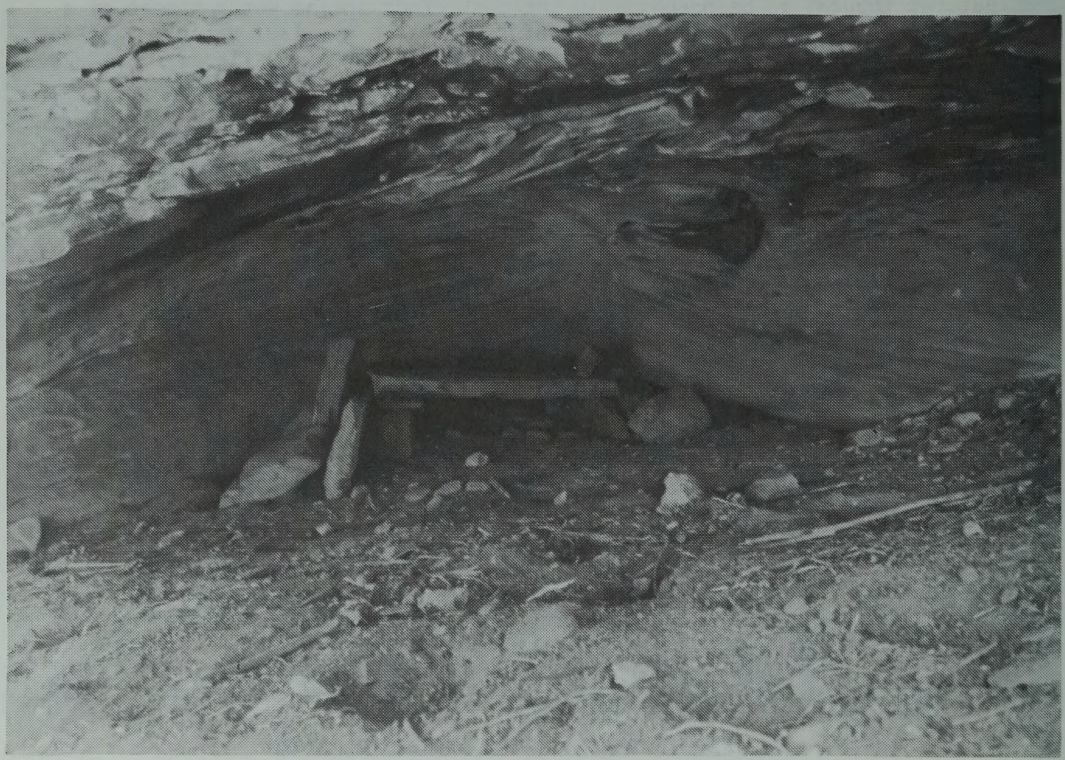

Figure 5-34. Photograph Illustrating an Alcove Shrine on Mockingbird Mesa.

activity areas contained only a single feature, while the remaining 113 areas contained an the average of 5 features. The largest recorded group of fire-associated processing areas was composed of 22 features.

In general, fire-associated processing areas were located throughout the mesa, with 96 being located on R soils, 121 on M soils and 1 on V soils.

Pottery Kilns

A total of 17 fire-associated processing areas could be confidently classified as pottery kilns. The basis for this classification was the morphology of the feature(s) and the presence of spalled and warped pottery sherds. The morphology of the kilns consisted of rectangular (or subrectangular) semi-subterranean slab-lined boxes no more than 2 meters in width and no more than 4 meters in length. Figure 5-35 presents a photograph of a pottery kiln on Mockingbird Mesa.

Based on associated surface ceramics, all 17 were dated to the Anasazi time period; of these six could be dated to the Late Anasazi time period, and another six could be further dated to the Pueblo III time period.

All 17 pottery kiln sites were situated on M-class soils. Within M-class soils, the kilns were generally situated on the slopes or in the bottoms of small intermittent drainages, primarily on the west side of the mesa. The consistency with which kilns were built in this topographic setting strongly suggests that the Anasazi were exclusively selecting this type of topographic setting for the firing of their pottery vessels.

Roasting Pits/Hearths

A total of 24 fire-associated processing areas on Mockingbird Mesa could be confidently classified as roasting pits or hearths. The basis for this classification was the morphology of the feature(s): they were small, (usually less than 1 meter in diameter) circular, burned upright sandstone slab alignments. These features were usually found in association with lithic materials, and one-third were found in association with chipping stations. Figure 5-36 presents a photograph of a roasting pit or hearth.

On Mockingbird Mesa, roasting pits or hearths were found on sites which could be dated to the Middle Archaic (2) and Anasazi (12) time periods. Almost half of these features, however, could only be dated to the general prehistoric time period, because the sites on which they occurred did not contain surface evidence which allowed for any finer dating resolution.

Five of the 24 roasting pits/hearths were located on R-class soils while the remaining 19 were located on M-class soils. The high proportion of these features on M-class soils suggests that the people who built them preferred the mesa margins for the construction of such features.

Regional Comparisons

During the past 10 years as survey methodologies have improved, more and more fire-associated processing areas have been located in the San Juan drainage basin. However, in no place has the density of these processing areas been shown to be higher than it is in the Yellow Jacket, Cross Canyon

Figure 5-35. Photograph Illustrating a Pottery Kiln on Mockingbird Mesa.

Figure 5-36. Photograph Illustrating a Roasting Pit/Hearth on Mockingbird Mesa.

and Montezuma Creek drainage systems. About 20 miles northwest of Mockingbird Mesa, in the Montezuma Creek area "the infamous isolated burned rock and ash features..seem to be everywhere on the canyon and mesa slopes" (Brown 1984:16).

Mockingbird Mesa is situated in an area north of the San Juan River where recent investigations have located numerous pottery kilns. To the west, at Hovenweep and on Alkali Ridge, and to the east, in Woods Canyon and on Burro Point, over 100 kilns have been located (Winter et al 1977, Hibbets and Harden 1982, Goulding 1981, Fuller 1984, and Honeycutt and Fetterman 1985a). Like the kilns on Mockingbird, these kilns have usually been found on the edges of mesas, on slopes or in the bottoms of small drainages, on shallow rocky soils. The consistency of kiln placement in this type of location has been variously interpreted as being a prehistoric response to the availability of fuel (Fuller 1984) and the control of drafts (Hibbets and Harden 1982).

Of the many kilns that have been located in the vicinity of Mockingbird Mesa, only a few have been excavated. The majority of these excavated kilns have dated to the Pueblo III time period. One exception, is a kiln which dates to the Pueblo I time period, recently excavated in Negro Canyon, just west of Mockingbird Mesa (B. Hibbets, personal communication).

APL--Lithic Processing Areas

A total of 111 sites on Mockingbird Mesa were classified as lithic processing activity areas. One of these sites was classified as a lithic quarry (APLQ) while the other 110 sites were classified as chipping stations (APLC).

Quarry

The quarry consists of an outcrop of white Burro Canyon orthoquartzite located at the far western edge of the survey area on a canyon slope. The topographical setting of this quarry suggests that further survey of the canyon slopes around Mockingbird Mesa will be likely to discover additional quarry sites.

Chipping Stations

All 110 chipping stations contained flaked lithic artifacts which indicated lithic reduction or tool manufacture had been one of the major activities on the sites.

These lithic artifacts represent a prehistoric utilization of the area's resources, as locally-available lithic materials predominated on the sites. Of these materials, the most common were Morrison silicified sediment and Burro Canyon quartzite; less common, but often present were Morrison chert, Burro Canyon chert, and Brushy Basin chert. Indicating prehistoric trade or travel were the non-locally available lithic materials such as cherts from Washington Pass and Missionary Ridge and obsidian from the Jemez Mountains. These materials were identified only infrequently on the sites.

Most of the lithic artifacts found on these sites were pieces of debitage, primarily tertiary, but also secondary and primary flakes. Flaked lithic tools were noted on more than 50% of the sites; the most common tool

types were projectile points and bifaces, suggesting that these sites were associated with hunting or butchering activities.

Of the 110 sites, over half (68) contained burned rock features or ground stone tools in addition to flaked lithic artifacts. The presence of burned rock features on some chipping stations suggests that food cooking also occurred on these sites. No direct evidence was noted for heat-treating of lithic materials.

The majority (86%) of all chipping stations were situated on M-class soils. The significance of this site distribution may lie in the fact that M-class soils occur along canyon rims and drainages, locations which exhibit more topographic and environmental variability than does the relatively flat mesa top. If one assumes chipping stations are associated with hunting activities, then it is logical for these sites to be situated in areas of relatively high environmental variability.

All chipping stations were dated to the prehistoric period based on the presence of flaked lithic artifacts and the absence of flaked glass artifacts. Slightly over half (52%) could be further dated to the Anasazi time period, based on the presence of small numbers of sherds or diagnostic projectile points, and twelve percent could be further dated to the Archaic time period, based on the presence of diagnostic projectile points.

ASF--Food Storage Sites

Seventeen activity areas contained evidence that food storage was a major focus of the sites. Two of these sites were isolated cists (ASFC) and fifteen were granaries (ASFG).

Cists

Two sites were tentatively identified as isolated food storage cists. Both were situated on the western side of the mesa, one on M2DD soils and the other on ROC soils. The surface evidence of these features consisted of small piles of rubble with little in the way of associated artifactual material. Based on limited ceramic assemblages these sites were dated to the Pueblo II time period.

Granaries

The fifteen granaries were located in rock overhangs in the cliff face or against large boulders on the talus slopes of Mockingbird Mesa (see Figure 5-37). All of the granaries dated to the Anasazi time period, with most dating to the latter half of this period. In the many instances, the granaries were not directly associated with permanent or temporary habitations, or with any other types of activities. At one granary a dozen corn-grinding tools were located, suggesting that corn was ground either before storage or prior to removal from the site.

Most of the granaries have relatively easy access due to the fact that the cliff edge around Mockingbird is only several dozen feet high at most. In spite of this, however, the granaries are not easily visible, since many of the overhangs are small and relatively deep, and the huge talus slope boulders impair visibility along the cliffs.

Figure 5-37. Photograph Illustrating a Granary on Mockingbird Mesa.

ASW--Water Storage Areas

Nine water storage sites were located on Mockingbird Mesa. Two of these sites were historic wells and the other seven were the remains of Anasazi reservoirs.

The Anasazi reservoirs were masonry dams made of large sandstone blocks. These blocks had been used to construct horizontally-coursed, low- to medium-height walls which were usually reinforced with earth. Two of the reservoirs were made of double masonry walls, horizontally-coursed, parallel to each other and approximately 2 meters apart, having the space between them filled with earth. While the reservoirs were similar in shape, forming either "C"s or "U"s, they varied widely in size. The smallest reservoir had a dam measuring approximately 1 by 14 by 0.5 meters, and is estimated to have held approximately 8,000 gallons of water. The largest reservoir had a dam approximately 75 by 4 by 1 meters, and is estimated to have held approximately 200,000 gallons of water.

In order to collect such large amounts of water, the reservoirs had been built in two types of locations where upslope conditions maximized water runoff into the reservoirs. The first such type of location was the large expanses of sandstone bedrock exposed by erosion along the edges of the mesa. In these areas the reservoirs had been built at the lower ends of the bedrock exposures. This type of location was well-suited for water collection, since the virtual absence of water-absorbing soil guaranteed that all water reaching the bedrock would flow into the reservoirs. The second type of location was the deeper intermittent drainages of the mesa. In these areas reservoirs were built directly in the drainages. This type of location was also well-suited for water collection, as the water from dozens of upstream tributaries eventually flowed into the reservoirs; however, the danger of flash-flood destruction of the reservoirs was probably greater in this type of location.

Temporally diagnostic artifacts were usually not in good association with the reservoirs, so almost all of them were dated to the Late Anasazi time period on the basis of architecture and masonry. All except one reservoir are located within 400 meters of a large Pueblo III permanent habitation site.

Regional Comparisons

Water reservoirs have been located in many places in the Northern San Juan Area (Prudden 1903, 1916; Fewkes 1925; Winter 1974, 1975, and 1976; Rohn 1963; Haase 1985; and Breternitz 1985). These reservoirs have for the most part been association with the Late Anasazi occupation of the area. In addition to their obvious uses as water collection and storage devices, reservoirs appear also to have been used for increasing percolation to underground aquifers (Noisat 1976:195), and subirrigating nearby farming plots (Winter 1977:208).

DIACHRONIC ANALYSIS

This section presents an analysis of the changes which occurred in human population levels and settlement patterns throughout the Anasazi period on Mockingbird Mesa. Due to insufficient data, the Archaic-Basketmaker II and Historic periods could not be included in such analysis.

Population Levels

A quick glance through the Anasazi portion of the Synchronic Analysis section reveals that numbers of sites and estimated numbers of households differ from period to period. In order to relate these numbers to changes in population levels a procedure was devised for estimating populations.

Population Estimation Procedure

Any procedure used for estimating populations from survey data must be based on (1) data retrievable from surface evidence and (2) numerous unprovable assumptions. The tenuous nature of these bases usually leaves the accuracy of the estimates open to question, but the results provide rough estimates of both the paleodemography and total population levels of the society.

The procedure used here utilizes household estimates derived from surface evidence (see Chapter 2, page 7 for how these estimates were derived) and four main assumptions. These four assumptions are presented below.

1) The average life expectancy for an Anasazi structure was 12 years. This figure is based on ethnographic evidence and tree-ring dates for earthen structures (Schlanger 1985) and on construction and remodeling dates for masonry structures (Rohn 1971 and Cattanach 1980).

2) The average life expectancy of an Anasazi individual was 22.1 years. This figure was obtained from a skeletal population of 150 individuals from Mesa Verde (Stodder 1984).

3) Each Anasazi household was occupied by five people. This figure was obtained primarily from ethnographic data on Pueblo societies of the Southwest (Turner and Lofgren 1966 and Schlanger 1985).

4) Mockingbird Mesa was first occupied by Basketmaker III people in AD 600 and was abandoned by Late Pueblo III people in AD 1275. These dates are based on tree-ring data from Basketmaker III and Pueblo III habitations in southwestern Colorado (Robinson and Harrill 1974).

In order to characterize populations, two types of population estimates are derived for Mockingbird Mesa: total population and momentary population. Total population (the total number of individuals who lived during any given time period) is derived using the following equation:

$$\text{number of households} \times \text{number of people per household} \times \frac{\text{life expectancy of structure}}{\text{life expectancy of individual}}$$

Momentary population (the number of individuals who lived during any given moment during any given time period) is derived using the equation:

$$\text{total population} \times \frac{\text{life expectancy of individual}}{\text{number of years in time period}}$$

For each type of population estimate, two sets of population figures are presented: 1) a minimum which assumes there was no structural remodeling and therefore a household's structure lasted only 12 years, and 2) a maximum which assumes there was structural remodeling and therefore a household's structure lasted throughout the entire time period.

Population Estimates

Using the procedures outlined above, population estimates were derived for the Anasazi period on Mockingbird Mesa. These estimates are presented in the following table.

Table 5-7. Population Estimates for the Anasazi Period on Mockingbird Mesa.

	Length of Period in Years	Estimated No. of Households	Minimum Population		Maximum Population	
			Total	Momentary	Total	Momentary
Basketmaker III	125	80	217	21	2260	217
Early Pueblo I	75	17	46	14	288	85
Late Pueblo I	100	10	27	6	225	50
Early Pueblo II	100	66	178	39	1483	328
Late Pueblo II	100	72	195	43	1625	359
Early Pueblo III	100	118	319	70	2658	587
Late Pueblo III	75	155	419	123	2619	772
Total Anasazi Population			1,401		11,158	

The above estimates present rough maximum and minimum figures for the Anasazi population on Mockingbird Mesa. It is probable that the actual population figure for each of these periods falls somewhere in between the minimum and maximum. Based on the results of excavation in the area (Ives 1971, 1972, 1973; Wheat, personal communication; Rohn 1974; Fetterman and Honeycutt 1982) it is thought that the early sites (Basketmaker III and Pueblo I) were mostly short-term occupations and thus the minimum estimates are probably more accurate, while the later sites (Pueblo II and Pueblo III) were mostly long-term occupations and thus the maximum estimates are probably more accurate.

Population Density and Carrying Capacity

Using the above population estimates, minimum and maximum population densities were derived for the Anasazi occupation of Mockingbird Mesa. Using the minima data, the Late Pueblo I period was determined to be time of lowest population density, with 1 individual per every 666 acres and 1 household per every 3,330 acres. Even after subtracting 50% of this acreage (to account for the fact that 50% of the mesa is non-farmable M-class soils), it is obvious that the Late Pueblo I people were well within the carrying capacity of the mesa, based on ethnographic comparisons. Using the maxima data, the Late Pueblo III period was determined to be the time of highest population density, with 1 individual per every 5 acres and 1 household per every 25 acres. Since only 50% of this acreage is suitable for agriculture, and since some agricultural lands were already in use as dwelling locations, the actual densities are even higher, with 1 individual per less than 2.5 acres of farmland and 1 household per less than 12.5 acres of farmland. For comparison, the demand levels for arable lands of ethnographic populations range from 2 to 4 acres per individual (Bradfield 1971). It can therefore be seen that the Late Pueblo III populations were within, but at the upper levels, of the carrying capacity of the mesa. If for some environmental reason such as drought or low temperatures more than 400 acres of agricultural land were removed from productivity, the Late Pueblo III population on Mockingbird Mesa could have exceeded the carrying capacity of the land.

Population Estimates in a Regional Context

The population estimates above can be used to create a population curve for Mockingbird Mesa. The resulting curve (using minima figures for Basketmaker III and Pueblo I and maxima figures for Pueblo II and Pueblo III) is illustrated in Figure 5-38, as are curves illustrating Anasazi population estimates for the Dolores River Valley and the Sacred Mountain Survey Area. As can be seen from this figure, populations on Mockingbird Mesa experienced a linear growth pattern between Basketmaker III and Late Pueblo III, except for a dramatic drop in population during the Pueblo I period.

For the Dolores River Valley, the curve is a partial inverse of the one shown for Mockingbird Mesa. Here, a small population established in the Basketmaker III period grew exponentially until it peaked around AD 860. The extremely rapid growth in population during the period AD 800-880 was the result of population influxes as well as internal population growth (Schlanger 1985). After AD 880 the population decreased and by AD 920 it was reduced to minimal levels, where it stayed until the valley was completely abandoned in the mid AD 1100's.

The third curve represents Anasazi population growth in lands that now comprise the Sacred Mountain Survey Area in southwestern Colorado (Mockingbird Mesa is included in this Area). This curve indicates a linear population growth from Basketmaker III times until Early Pueblo III times when the population peaked (Chandler et al. 1980). Populations of the Late Pueblo III period are seen as declining from those of the Early Pueblo III period. This curve differs from that of Mockingbird Mesa in two main ways: 1) it reflects the presence of a moderate-sized Pueblo I population and 2) it shows higher population levels for the Early Pueblo III than for the Late Pueblo III period. These two differences can be explained by the fact that (1) the Sacred Mountain Survey included areas which contained large Pueblo I

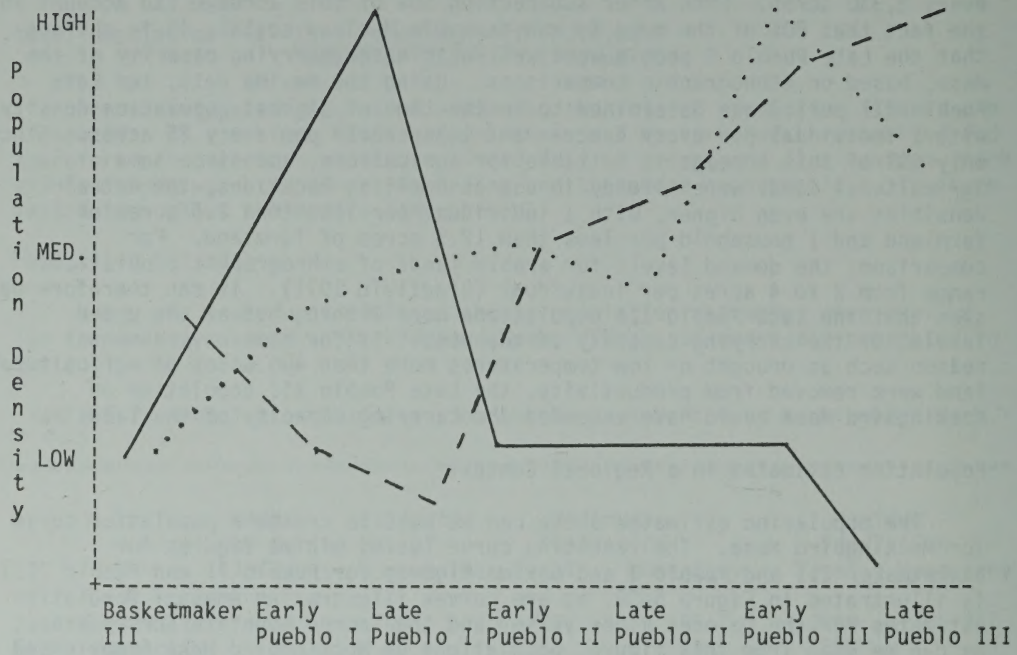

Figure 5-38. Graph Illustrating Population Trends in the Dolores River Valley Sacred Mountain Planning Unit and on Mockingbird Mesa.

populations and (2) the southwestern portion of the Sacred Mountain Survey Area, (where Mockingbird Mesa is located) contains larger Late Pueblo III populations than does the Survey Area as a whole.

Settlement Analysis

As can be seen in reviewing the previous section, changes occurred through time in the Anasazi utilization of Mockingbird Mesa. This section will present comparisons of these changes with respect to topography, elevation, and distance to water.

TOPOGRAPHY

The first comparison concerns the changes in topographic settings of Anasazi permanent habitations. To conduct this comparison, soil mapping units will be used as proxies for topographic locations: R-classification soils will be used as proxies for mesa top locations, while M-classification soils will be used as proxies for mesa edge and canyon slope locations. To compare site settlement with respect to topography, permanent habitations are compared through time to mesa top (R type soils) or mesa margin (M type soil) locations. Figure 5-39 presents a histogram showing this comparison.

As can be seen from this figure a shift from the mesa tops to the mesa margins occurred between Late Pueblo I and Late Pueblo III times. To explain this trend a model has been developed which proposes that architecture was the primary factor which determined where the Anasazi people situated their habitations. The reasoning behind this model is as follows. In the earliest period of Anasazi occupation on Mockingbird Mesa, the Basketmaker III people lived in pithouses. In order to construct these pithouses, the people choose locations where excavations would be easy and where, once built, the pithouses would not be flooded during wet times of the year. If the house sites corresponded to field locations, this was all the better. These criteria could be met on mesa top locations where the soil was deep, well-drained, and suited for agricultural production. The soil excavated from the pithouses was used in roofing the pithouses and in constructing nearby surface storage rooms. Any wood or rock necessary for house construction was easily obtained from the mesa edges, where pinyon and juniper trees grew and rocks lay exposed by erosion. This utilization of the deep-soil mesa tops continued through the Pueblo I and Early Pueblo II time periods. The architecture of both these periods consisted of subterranean structures and adobe surface rooms similar in resource needs to the structures of the earlier Basketmaker III time period. The masonry rooms built during Late Pueblo I and Early Pueblo II were made from adobe and unshaped sandstone slabs. The slabs were obtained from rock exposures along the mesa edge and were transported fairly easily from these sources to the houses located in the mesa interior.

Perhaps either as a result of depletion of local timber supplies, or due to changing cultural norms, a shift from adobe to masonry structures occurred by the end of the Early Pueblo II period on Mockingbird Mesa. Beginning in the Late Pueblo II period, as the style of horizontally-coursed masonry became ever more popular, more and more rock was required for the construction of houses, and the amount of work involved in transporting this rock increased substantially. To reduce the work of carrying rock to the building sites, the building sites were moved closer to the rock, with the result that mesa margins gained in popularity as building locations during the latter half of

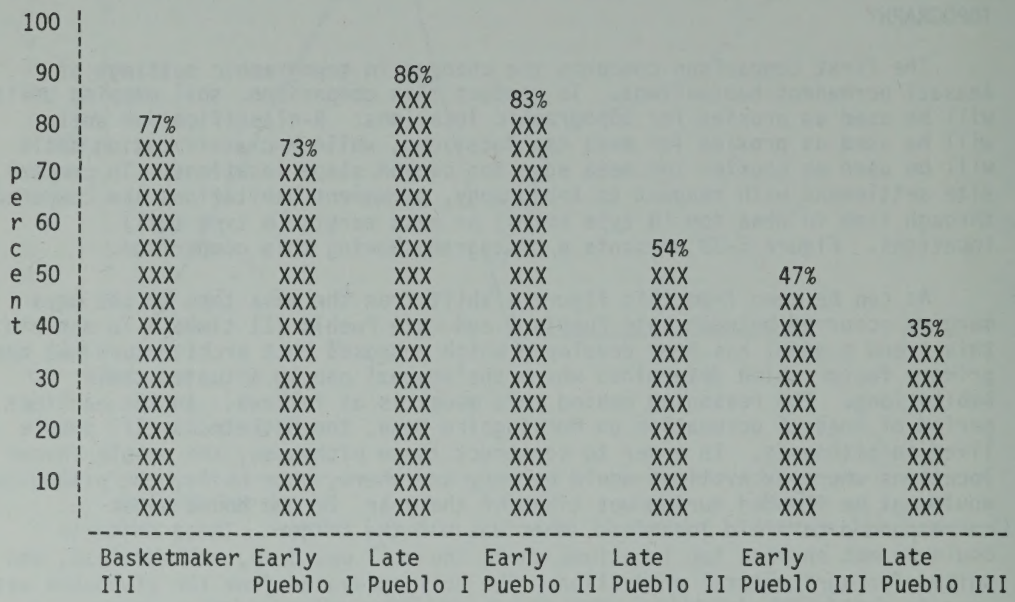

Figure 5-39. Histogram Illustrating Percentages of Anasazi Permanent Habitations on R-Class Soils.

the Anasazi period. One problem with this new settlement pattern was the fact that the people now often lived far from their agricultural fields. To solve this problem people built small houses near their fields in which they lived on a seasonal basis. By Pueblo III times much of the architecture consisted of large, thick-walled masonry structures made of large shaped sandstone blocks. The uniformity of these blocks suggests that the Anasazi were mining them from cliff faces rather than picking them up from loose rock exposures. The sites built during this period were often large and their construction required enormous amounts of rock. By moving their sites closer to cliff faces, the Late Pueblo III Anasazi reduced the amount of work involved in building these structures. In addition to being sources of rock, cliff face locations were often sources of water and thus it was possible to select site locations which minimized the transportation of both building rock and drinking water. If a cliff site was chosen that had a southern exposure, the benefit of solar heating in the winter was also obtained.

In order to determine if a transition from mesa top to mesa slope to cliff face and canyon slope locations occurred between the Pueblo II and Pueblo III periods, the following table was created.

Table 5-8. Numbers and Percentages of Pueblo II and Pueblo III Permanent Habitations in Relation to R and M Soil Classifications.

	R Soils Mesa top	M2DD Soils Mesa Slope	M2CE Soils Cliff Face	M2C Soils Canyon Slope
Early Pueblo II	39 (83%)	5 (11%)	0 (0%)	3 (6%)
Late Pueblo II	20 (54%)	9 (24%)	2 (5%)	6 (17%)
Early Pueblo III	22 (47%)	10 (21%)	7 (15%)	8 (17%)
Late Pueblo III	17 (35%)	9 (18%)	11 (22%)	12 (25%)

As can be seen from this table a transition is apparent through time from mesa top through mesa slope to canyon slope and cliff face locations.

ELEVATION

In order to determine if the Anasazi preferred one portion of the mesa over another, the mesa was divided into thirds from north to south. The number of sites in each third was tabulated for each period and density figures of sites-per-acre were calculated. The results of these calculations were then plotted as a histogram which is illustrated in Figure 5-40.

As can be seen from this figure, the northern third was the most densely utilized area during all periods, while the southern third was the least densely utilized area for all periods except the Basketmaker III. An explanation of this patterning may be attributable to the slight elevational differences of the three thirds. The northern third is the highest in elevation and hence probably receives the most precipitation and has the

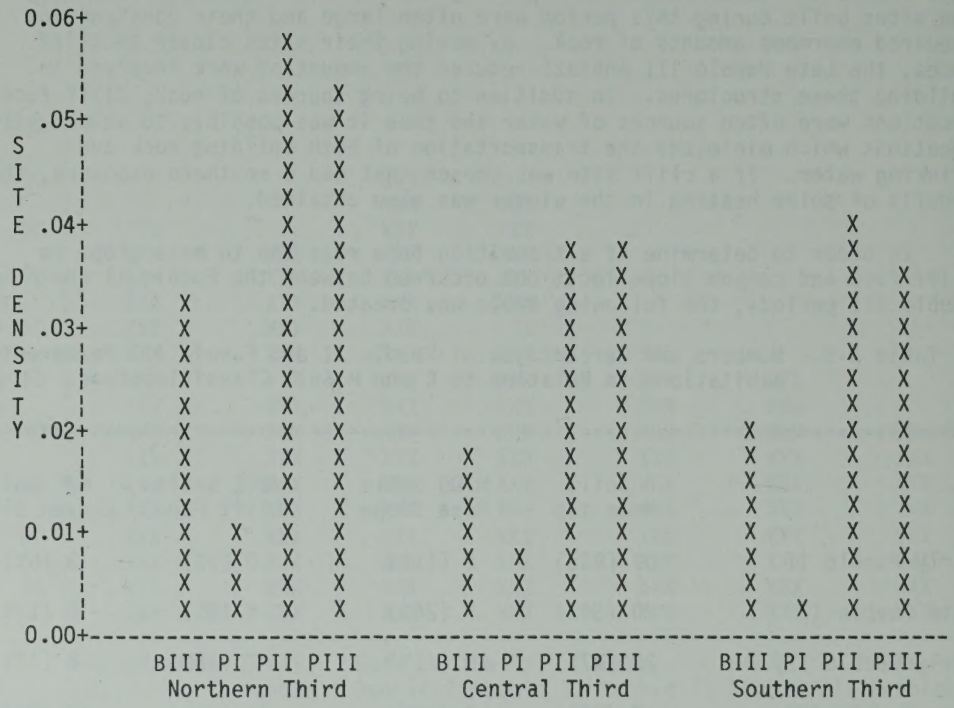

Figure 5-40. Histogram Illustrating Anasazi Site Densities in Relation to Northern, Central, and Southern Thirds of Mockingbird Mesa.

lowest evapotransporation rate, while the southern third is the lowest in elevation and hence probably receives the least amount of precipitation and has the highest evapotransporation rate.

DISTANCE TO WATER

In order to determine if site settlement was associated with water, the distance was calculated for each permanent habitation in relation to the nearest known spring on Mockingbird Mesa. When the average distance from site to spring was calculated for habitations of each time period, no large differences could be detected, as less than 100 meters separated the average longest distance (634 meters during Late Pueblo I) from the average shortest distance (548 meters during Late Pueblo III). This probably reflects to some extent the average distance from any point on the mesa to any spring on the mesa. However, when the data for households was examined on an interval basis, a pattern became clear, as is illustrated in Figure 5-41.

As can be seen from this figure, for the Late Pueblo III period the number of households is inversely proportional to the distance to nearest spring, while for the Basketmaker III through Early Pueblo III periods the number of households is normally distributed in relation to the distance to nearest spring. In other words, the Anasazi people, with the exception of the Late Pueblo III people, built their houses without regard to the distance to the nearest spring.

COMMUNITY ANALYSIS

In order to detect changes in Anasazi community composition and structure through time, it is necessary first to identify the communities and then to compare them through time.

Identification of Anasazi Communities

During the initial phases of this project it was thought that specific Anasazi communities would be identified on the mesa. The archaeological literature contains many schematic reconstructions of how Anasazi communities might have looked (e.g. Kane 1983 and Haase 1983). While it is easy to draw schematic reconstructions of communities, it is much more difficult to identify specific communities in the actual archaeological record. Two particular difficulties were encountered in trying to identify specific communities on Mockingbird Mesa. The first was that the survey data was insufficient to positively establish contemporaneity between permanent habitations, temporary habitations, and activity areas. This was due primarily to the fact that the temporary habitations and activity areas frequently lacked the numbers or types of ceramics which would have permitted fine-resolution dating of these sites. The second was that the survey data did not permit the detection of specific inter-site social ties. This was in part due to the extreme high density of sites on the mesa and in part due to the lack physiographic features which could have delineated community boundaries.

In an attempt to identify Anasazi communities on Mockingbird Mesa a mathematical cluster analysis procedure was used (see Chapter 2). While this procedure identified spatially clustered permanent habitations it did not necessarily prove that these clusters represented Anasazi communities.

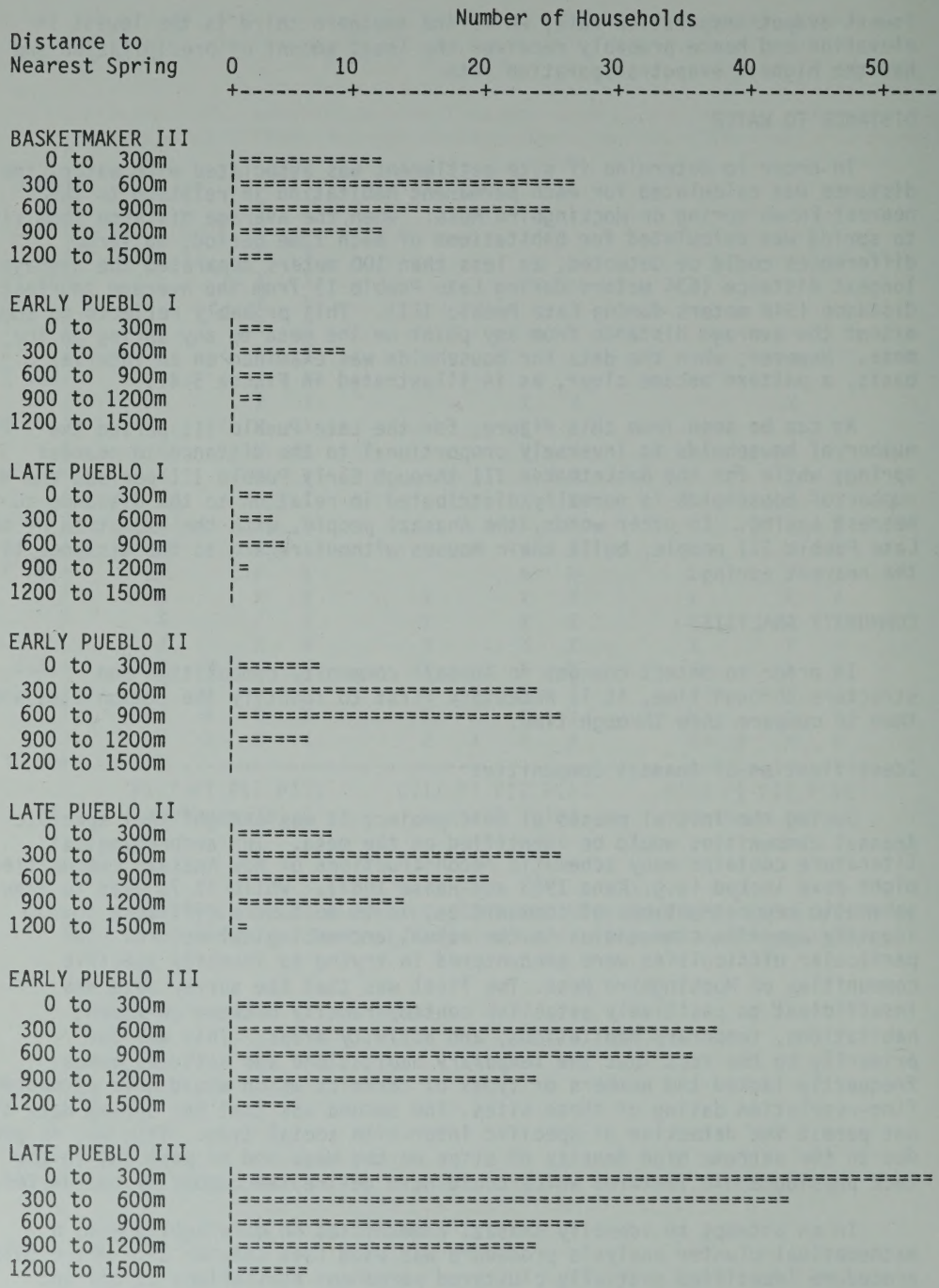

Figure 5-41. Numbers of Anasazi Households in Relation to Nearest Spring.

Based on the tentative nature of the cluster analysis, it was decided not to use the results of this procedure for the diachronic analysis of Anasazi community structure. Instead data on the Anasazi occupation of the whole mesa was used for this analysis. The assumption behind the use of this data set is that it represents one or more communities and therefore the composition of this data set reflects the composition of the communities themselves.

Identification of Changes in Community Structure Through Time

In order to analyze changes in Anasazi community structure through time three methods were chosen. These three methods are diachronic comparisons of (1) the percentages of single household permanent habitations to all permanent habitations, (2) the results of nearest neighbor analysis, and (3) the relative percentages of types of sites.

Comparison of Percentages of Single Household Habitations

Figure 5-42 presents the data concerning the percentages of single household permanent habitations in relation to all permanent habitations through the Anasazi period. As can be seen from this figure a bimodal pattern exists through time. For the Basketmaker III period, the vast majority of habitations are single household habitations. For the subsequent Pueblo I period the percentage of single household habitations drops, indicating a tendency for household aggregation. By the Early Pueblo II period an increase is seen in the percentage of single household habitations, indicating that households became more dispersed than they previously had been. For the Late Pueblo II through Late Pueblo III periods the percentage of single household habitations decreases continuously, indicating a steady increase in household aggregation.

Comparison of Results of Nearest Neighbor Analysis

In order to understand the distribution of permanent habitations on the mesa, a nearest neighbor analysis was conducted the identify the spatial relationship of habitations to each other. The results of this analysis, using methods presented by Kane (1983), are as follows.

Nearest Neighbor Value							
R=	0.94	1.03	0.80	0.86	1.08	1.17	1.13
	Basketmaker III	Early Pueblo I	Late Pueblo I	Early Pueblo II	Late Pueblo II	Early Pueblo III	Late Pueblo III

In order to interpret this information it should be understood that a value for R of 1 represents a random distribution, a value for R of 0 to 1 indicates a clustered distribution, and a value for R of 1 to 2.14 represents a evenly spaced distribution. As can be seen from this analysis, Basketmaker III, Late Pueblo I, and Early Pueblo II habitations tended to be slightly clustered, while Early Pueblo I, Late Pueblo II, Early Pueblo III, and Late Pueblo III habitations tended to be more evenly spaced.

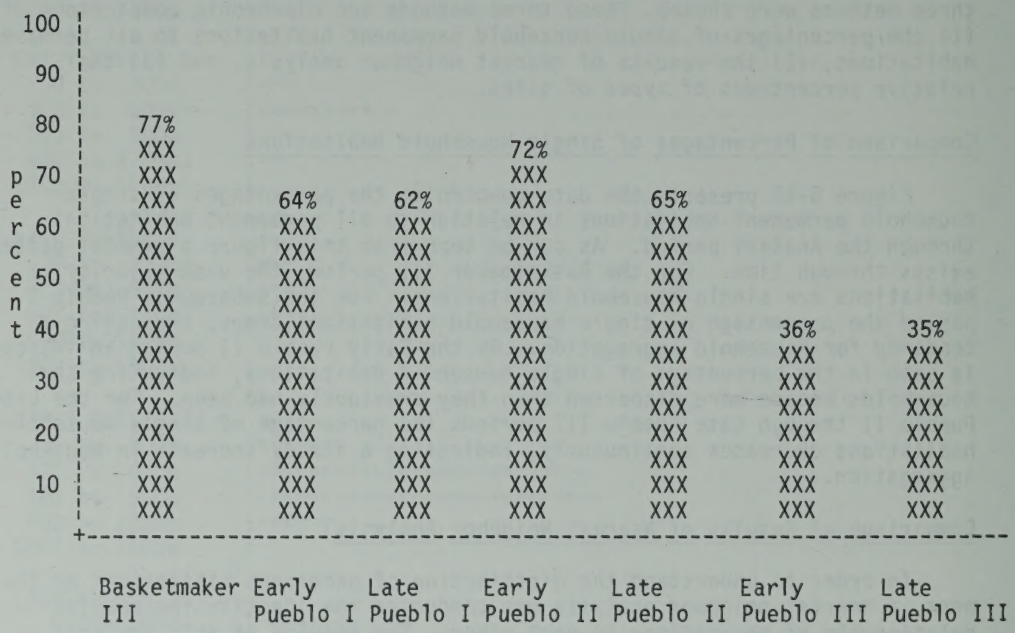

Figure 5-42. Percentage of Single Household Permanent Habitations Compared to All Permanent Habitations of the Anasazi Period.

Comparison of Percentages of Types of Sites

In order to look for changes in community composition, a comparison was made between the percentages of permanent habitations, temporary habitations, and activity areas for the time periods AD 450 - 900 and AD 900 - 1300. These time periods were used for two reasons: (1) they represent two distinct stages of occupation on the mesa and (2) they allow for the inclusion of data on activity areas and temporary habitations which could not otherwise be used, due to their low temporal resolution. Table 5-9 presents the data for this comparison.

Table 5-9. Relative Percentages of Site Types of the Early and Late Anasazi Periods.

	Early Anasazi (AD 450-900)	Late Anasazi (AD 900-1300)
Permanent Habitations	62% (82)	35% (180)
Temporary Habitations	12% (16)	24% (121)
Activity Areas	26% (34)	41% (209)

It can be seen from this table that Early Anasazi communities were composed primarily of permanent habitations with a few temporary habitations and activity areas, while Late Anasazi communities were composed of roughly similar percentages of activity areas and permanent habitations and a few temporary habitations. Through time it is evident that activity areas and temporary habitations played a larger role in Anasazi community structure.

Summary

The results of these diachronic analyses taken together illustrate some interesting trends concerning the Anasazi occupation of the mesa. The following text summarizes these trends.

The first substantial Anasazi populations to occupy the mesa were the Basketmaker III people. These people settled the mesa by living in communities of small habitations clustered in areas of deep soil resources. Their dwellings were located near many of their needed resources and were the loci of many of their activities. Similar settlement patterns were practiced by the few descendants who remained on Mockingbird Mesa during the Pueblo I period. Most of the Pueblo I people apparently left the mesa and went to areas such as the Dolores River Valley. The ones who stayed on the mesa aggregated into one community composed of two large habitation and several small habitation sites. The advent of the Tenth century saw many Pueblo II people moving onto the mesa. These people, like those before them, settled in communities of small habitations clustered in areas of deep soil resources. After these people settled in and their populations grew, certain changes started to occur. Increasingly, people lived in multiple household habitations which generally were arranged in evenly distributed communities. Concurrent

with this change was the increased use of masonry in the construction of dwellings and a shift to the use of the mesa margins. The shift to the mesa margins and the construction of multiple household habitations increased the need for site specialization and therefore many of the activities previously conducted at permanent habitations were now being carried out at temporary habitations or activity areas. These changes in the society continued as the population of the mesa grew through the Late Pueblo III period. The population size during the Late Pueblo III period is estimated to have approached the carrying capacity of Mockingbird Mesa. With the advent of the drought of the late AD 1200's, the population may have outstripped the agricultural productivity of the land, and as a result the Late Pueblo III peoples left the mesa for regions further south.

CHAPTER 6

MANAGEMENT RECOMMENDATIONS

INTRODUCTION

As stated in Chapter 1, the Bureau of Land Management is required by law to identify, evaluate, and protect prehistoric and historic cultural resources on lands under its jurisdiction. This chapter both discusses how the BLM is currently meeting these legal requirements on Mockingbird Mesa and makes recommendations for how the BLM could improve its management of Mockingbird Mesa to meet its legal requirement associated with cultural resources.

IDENTIFICATION OF CULTURAL RESOURCES

The goal of the Mockingbird Mesa Class III survey was the identification of all cultural resources on the mesa. To this end, the survey identified 684 sites, 27 localities, and 68 isolated finds in a 3,976 acre area. Data on these resources is summarized in this report and compiled in the forms filled out for each site, loci, and isolated find.

RECOMMENDATIONS

The completion of this Class III survey satisfies the Bureau of Land Management's legal requirement for identifying all cultural resources in these 3,976 acres of Mockingbird Mesa. No further survey is recommended for these acres.

EVALUATION OF CULTURAL RESOURCES

SIGNIFICANCE

Significance of the cultural resources on Mockingbird Mesa is without question. This area contains one of the highest site densities (110 sites per square mile) of any place in the United States and contains one of the largest documented data bases of cultural resource information in southwestern Colorado. The data contained within the archaeological sites on Mockingbird Mesa could yield a wealth of information important to our understanding of the prehistory. The following are several important avenues that could be researched given the present knowledge of the archaeology of the Southwest and the resources on Mockingbird Mesa.

1) The survey indicates a possible Middle Archaic community in the center of Mockingbird Mesa. Since findings of such communities are rare in southwestern Colorado (Eddy et al 1984), the research potential and significance of this community is very high.

2) The presence of several Late Archaic-Basketmaker II sites on Mockingbird Mesa provide a data base for exploring the development of formative cultures (the Anasazi) in southwestern Colorado.

3) The Anasazi occupation of the mesa dominates the archaeological record. The 562 sites which could be dated to the Anasazi time period represent a large block of information for research. These sites, of varying age, size, and site type, offer researchers the opportunity to examine diachronic intra-site, inter-site, and inter-community relations on a scale not available in other areas of the Southwest.

4) The large quantity of Anasazi activity areas in good condition on Mockingbird Mesa provides a rich and diverse data base for research associated with prehistoric settlement and land use patterns.

5) The apparent large quantity of Late Pueblo III sites on Mockingbird Mesa provides a good data base for investigating life immediately prior to the abandonment of the area. Research at these sites could contribute to our understanding of the reasons for the Anasazi abandonment of Southwestern Colorado.

ELIGIBILITY TO NATIONAL REGISTER OF HISTORIC PLACES

All the cultural resources located on Mockingbird Mesa were evaluated based on their eligibility to the National Register of Historic Places, under the framework of regulations 36 CFR 800 and 36 CFR 63. For a cultural resource to be eligible, it must meet one of the four following criteria: A) it is associated with events that have made a significant contribution to the broad patterns of history; B) it is associated with the lives of persons significant in our past; C) it embodies the distinctive characteristics of a type, period, or method of construction; or D) it has yielded, or is likely to yield, information important in prehistory or history.

Based on criteria C and D, an evaluation of the 684 archaeological sites on Mockingbird Mesa indicates that 306 are eligible, 329 are potentially eligible, and 51 are not eligible for the National Register of Historic Places. In other words, 93% of the sites on Mockingbird Mesa are either eligible or potentially eligible for the National Register of Historic Places.

In addition to treating cultural resources as sites the regulations allow cultural resources to be treated as districts. Districts are groupings of sites and other cultural resources that represent a community. Since the top of Mockingbird Mesa probably represents the location of at least several prehistoric communities, it can be justifiably considered as a district. Based on the overwhelming majority of eligible sites in this district and the potential for research, it is evident that this district would be eligible for the National Register of Historic Places.

RECOMMENDATIONS

For the above reasons it is recommended that Mockingbird Mesa be considered an archaeological district. In addition, in order to fully protect such a district it is recommended that this district be nominated to the National Register of Historic Places.

PROTECTION OF CULTURAL RESOURCES

The cultural resources on Mockingbird Mesa require protection from four major types of disturbances. These disturbances are vandalism, chaining, energy exploration and development, and structural disintegration.

Vandalism

HISTORY AND EFFECTS

Vandalism has been going on for a long time on Mockingbird Mesa. As long ago as AD 1200, people were collecting projectile points from archaeological sites; this is illustrated by the fact that a number of pre-Anasazi-style projectile points were found on Anasazi sites (see Figure 6-1). This occasional disturbance of sites by the prehistoric Anasazi is minor, however, compared to the damage inflicted upon cultural resources by the historic Anglo-Americans. During the last 100 years vandalism by historic Anglo-Americans has greatly affected the cultural resources of Mockingbird Mesa. In addition to surface collecting of both projectile points and sherds, Anglo-Americans have also mined large portions of sites in search of prehistoric artifacts.

On Mockingbird Mesa 88 sites exhibit direct evidence of having been vandalized. The vast majority (75%) of these sites are Late Anasazi permanent habitations, with the remainder being Early Anasazi permanent habitations (5%), Anasazi temporary habitations and activity areas (14%), and non-Anasazi habitation and activity areas (6%).

Vandalism on the Late Anasazi habitation sites consisted primarily of "potholes" dug in the middens. It is here that experienced pothunters know to look for pots buried by the Anasazi with their dead. Unfortunately, the years and years of pothunting on Mockingbird Mesa have destroyed many of these middens, with associated human burials long ago disinterred by these grave robbers. The destruction of these human burials represents a significant loss in data concerning the paleodemography, paleoepidemiology, diet, and social structure of the Late Anasazi inhabitants of Mockingbird Mesa.

Perhaps as a result of the destruction of the middens or the work of inexperienced pothunters, a new form of pothunting is apparent on Mockingbird Mesa. This pothunting which has been done during the last 4 years consists of the excavation of roomblocks, an illustration of which is presented in Figure 6-2. These roomblocks are located on Late Anasazi permanent habitation sites situated in densely treed areas. This new form of pothunting results in the destruction of new portions of the sites and correspondingly destroys different information than old forms of pothunting. Information lost due to this new form of pothunting includes data on architectural styles, methods of room construction, distribution of activities, and dates of construction.

METHODS CURRENTLY USED TO ABATE DISTURBANCES BY VANDALISM

The Bureau of Land Management currently uses four methods to reduce the threat of vandalism to cultural resources on Mockingbird Mesa. The first method is the restriction of vehicle access to the mesa through the use of a locked and guarded gate. The only individuals who are allowed access to the mesa by vehicle at this time are the grazing leasee, the oil and CO2 leasees,

Figure 6-1. Paleo-Indian and Archaic Style Projectile Points Recovered from Anasazi Sites on Mockingbird Mesa.

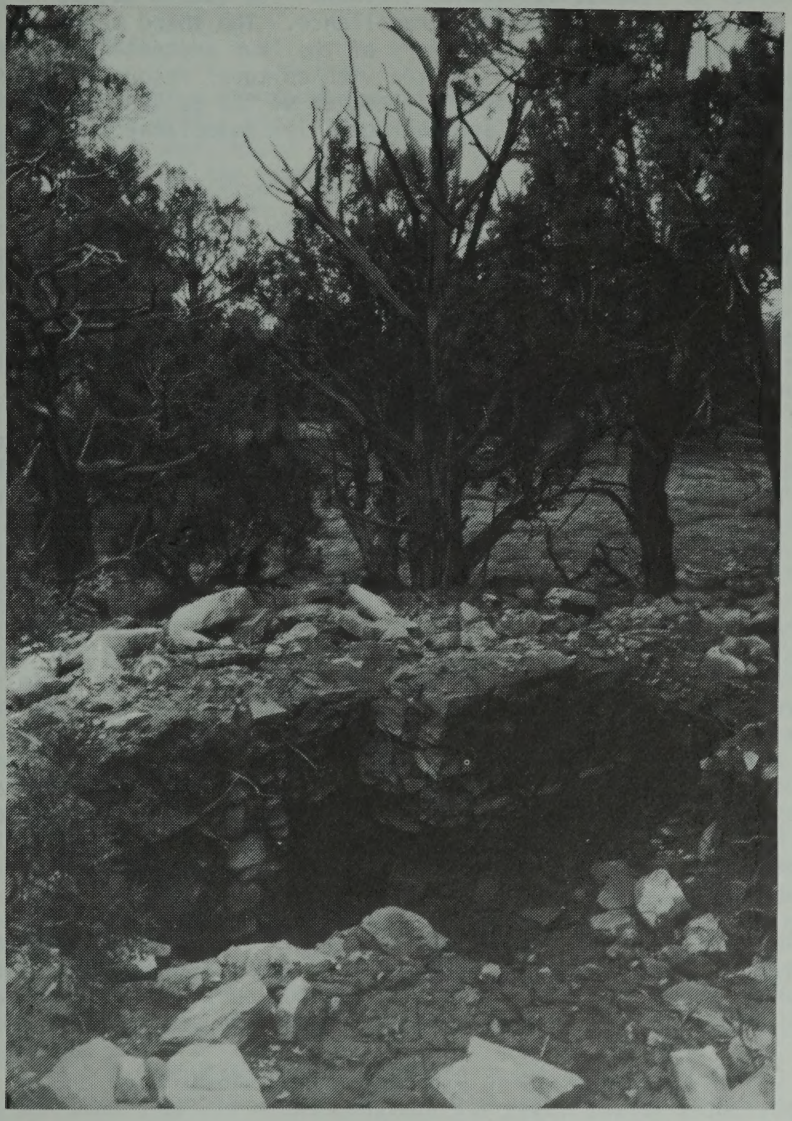

Figure 6-2. Photograph Illustrating Vandalized Roomblock of an Anasazi Permanent Habitation on Mockingbird Mesa.

and employees or representatives of the BLM. The second method is the use of regular ground patrol and aerial surveillance. The third method is the posting of signs which notify visitors of the laws protecting cultural resources and the penalties associated with cultural resource violations. The fourth method is the notification of leasees of the existence of laws protecting cultural resources and the penalties associated with cultural resource violations.

RECOMMENDATIONS

The four methods currently used to protect cultural resources from vandalism are working fairly well, and therefore the use of all four methods should be continued. While all these methods have perceptibly reduced the amount of vandalism to cultural resources on Mockingbird Mesa, they have not completely eliminated the problem. In order to further reduce the threat of vandalism to resources it is suggested that (1) "susceptible" sites located in areas of low visibility should receive more frequent patrolling, (2) make leasees legally responsible for individual employees or subcontractors in order to ensure that the leasees have reason to carefully monitor their employers or subcontractors both during and after construction activities, and (3) lock the gate at the trail leading to the Glass Homestead.

Chaining

HISTORY AND EFFECTS

During the 1960's in an attempt to increase forage for cattle, many of the pinyon and juniper trees on Mockingbird Mesa were killed by a process known as chaining. This chaining was done by two catepillar tractors dragging a large chain between them, toppling and uprooting trees as they traversed the mesa. During this process most of the cultural resources in the chained areas were disturbed by either the tractors themselves or the uprooted and dragged trees. Fortunately, a member of the BLM staff realized the value of cultural resources and prior to the chaining of Mockingbird Mesa flagged off and protected several of the large habitation sites on the mesa.

A total of 336 sites or almost half of all sites were disturbed by the chaining of Mockingbird Mesa. The extent of damage was related to the size and composition of the sites, with small and/or surficial sites usually being proportionately more damaged than were large and/or partially-buried sites.

METHODS CURRENTLY USED TO ABATE DISTURBANCES BY CHAINING

No chaining is currently being conducted on Mockingbird Mesa, nor is any proposed in the foreseeable future.

RECOMMENDATIONS

It is recommended that chaining be permitted on Mockingbird Mesa only in those areas which have been identified as being free of cultural resources. Since these areas are few in number, small in size, and usually accessible only by areas which contain cultural resources, this recommendation has the practical effect of being a recommendation for no future chaining on Mockingbird Mesa.

Energy Exploration and Development

HISTORY AND EFFECTS

Energy exploration and development on Mockingbird Mesa probably first started during the 1950's with both seismic studies and well drilling on the mesa. Overall, however, these early activities caused relatively little impact to the mesa, as the exploration did not led to development. However, within the past six years CO2 has been found on the mesa and Mockingbird has been the scene of a major energy development project, the Shell-Mobil CO2 McElmo Dome development project. On Mockingbird Mesa this project has entailed the construction of a large processing facility, the installation of miles of pipelines and powerlines, and the upgrading of miles of dirt trails to gravelled roads. In addition to this project, the recent finding of oil on the mesa by Celsius Energy will probably lead to another big development project on the mesa.

The first energy exploration projects, the seismic and well drilling exploration projects, were conducted without regard to cultural resources and a few cultural resource sites were inadvertently disturbed by these activities. The disturbance to the resources was relatively small, in part due to the limited nature of these exploration projects. In contrast, the recent energy development projects have been conducted with regard to cultural resources and as a result few direct impacts have occurred to cultural resources. However, indirectly, this energy development has had a negative effect on some of the cultural resources of Mockingbird Mesa. Vandalism, which in all probability can be attributed to construction personnel, has damaged a few archaeological sites on the mesa. This vandalism consists of both surface artifact collection and highly destructive digging in the roomblocks and middens of several sites.

METHODS CURRENTLY USED TO ABATE DISTURBANCES BY ENERGY DEVELOPMENT

The small amount of direct damage to cultural resources by energy development is primarily attributable to the Bureau of Land Management's requirements for archaeological survey, testing, and monitoring on energy exploration and development projects. These requirements have been instrumental in preventing damage to or destruction of many cultural resources on the mesa.

RECOMMENDATIONS

The BLM should by all means continue its requirements associated with energy exploration and development projects. While it is not necessary to require any additional archaeological survey of future projects on Mockingbird Mesa, it is highly recommended that the BLM require in field checks of the proposed projects by qualified archaeologist in order to identify the relationship of the proposed projects to known cultural resources. In addition, the BLM should increase those protective measures which would eliminate the indirect damages to sites associated with construction projects and limit, or if possible prohibit, energy development in the Glass Trail area, where site density is the highest, site visibility the lowest, and potential for tourist use the highest of any place on the mesa.

Structural Disintegration

HISTORY AND EFFECTS

Since the prehistoric human occupants left Mockingbird Mesa, the remains of their houses and features have been slowly disintegrating. A total of 21 sites are in need of some form of stabilization in order to abate this disintegration.

Twelve of these sites contain standing walls which are currently disintegrating and will collapse if no measures are taken to stabilize them. The most extreme case of this type is Parallel Wall House, 5MT1512, which is illustrated in Figure 6-3. As can be seen from this photograph, the standing walls on this site are over 3 meters in height and are currently free standing. Since part of the significance of this site and other sites in this category is associated with the fact they represent work of masters, contain artistic values and represent methods of construction, their disintegration would negatively effect their cultural resource values.

Six of these sites are disintegrating due to the fact that features or walls have been exposed by vandalism or archaeological excavations. These three sites require backfilling in order to halt further disintegration.

Four of these sites are disintegrating due to erosion. On these sites major structural elements are being exposed by arroyos and deflation. These three sites require water diversion and backfilling in order to halt further disintegration.

The following table presents the site numbers for sites requiring stabilization.

Table 6-1. Sites Requiring Stabilization.

Site Number	Type or Cause of Disintegration
5MT949	Erosion
5MT1000	Structural Collapse
5MT1512	Structural Collapse
5MT1544	Structural Collapse
5MT1550	Structural Collapse
5MT1595	Structural Collapse
5MT1619	Pothunting
5MT1622	Structural Collapse
5MT3033	Structural Collapse
5MT3034	Structural Collapse
5MT3048	Erosion
5MT3066	Erosion
5MT3173	Archaeological Excavation
5MT3219	Pothunting
5MT6768	Structural Collapse
5MT7354	Archaeological Excavation

Figure 6-3. Photograph Illustrating Site in Need of Stabilization on Mockingbird Mesa.

Table 6-1. Sites Requiring Stabilization. (concluded)

Site Number	Type or Cause of Disintegration
5MT7360	Pothunting
5MT7395	Structural Collapse, Erosion
5MT7400	Structural Collapse
5MT7405	Structural Collapse
5MT8511	Archaeological Excavation

EFFORTS CURRENTLY BEING USED TO ABATE DISTURBANCES BY STRUCTURAL DISINTEGRATION

No efforts are currently being undertaken by the Bureau of Land Management to prevent the continued disintegration of cultural resources on Mockingbird Mesa.

RECOMMENDATIONS

It is recommended that the BLM institute a program of stabilization for the 21 sites identified above. This work should involve the construction of checkdams and/or other water diversion devices on sites where erosion is destroying structures, the backfilling of structures that have been exposed by archaeologists, erosion, and pothunters, and the removing, resetting and/or tuckpointing of masonry on sites where structures are in danger of collapsing.

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APPENDIX 1

MOCKINGBIRD MESA SITE DATA

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT0930A	686310	4148680	ROB	T	800	HPM	P2L	Y	Y	N	N	N	0	2	2	13-1	0	Y	N
5MT0930B	686310	4148680	ROB	T	800	HPM	P3E	Y	Y	N	N	N	0	2	2	13-1	0	Y	N
5MT0931	684900	4144000	R7D	S	550	HTF	P2	N	Y	N	N	N	1	0	0	3-8	0	Y	N
5MT0932A	684960	4144220	R7D	S	500	HPS	B3	N	Y	N	N	N	12	0	1	3-1	0	Y	N
5MT0932B	684960	4144220	R7D	S	500	A	HA	N	Y	N	N	N	0	0	0	3-1	1	N	N
5MT0933	684990	4143630	ROC	T	700	HT	P2E	N	Y	N	N	N	2	0	0	3-11	0	?	N
5MT0934	684780	4143240	M2CE	S	800	HT	P2	N	N	N	N	Y	0	0	0	3-23	0	Y	N
5MT0935	684800	4143000	M2CE	S	1,000	HT,ASFG	P2	Y	N	N	N	Y	0	0	0	3-25	0	Y	N
5MT0936	684800	4142840	M2CE	S	1,100	A	AN	N	N	N	N	Y	0	0	0	3-26	0	?	N
5MT0938	684790	4142920	ROC	T	1,000	HTF	P2	N	Y	N	N	N	5	0	0	3-21	0	Y	N
5MT0945	685580	4149260	M2DD	S	1,100	HT	B3	N	Y	N	N	N	3	0	0	14-6	0	Y	N
5MT0946	684940	4148740	M2DD	A	800	APLC	PR	N	N	N	N	N	0	0	0	11-1	0	?	N
5MT0947	684350	4147930	ROD	A	1,000	HPM	B3	N	Y	N	N	N	8	0	2	11-12	0	Y	N
5MT0948A	686620	4149010	ROB	T	875	HPS	P1	Y	N	N	N	N	0	0	1	13-5	0	Y	Y
5MT0948B	686620	4149010	ROB	T	875	HPS	P2E	Y	N	N	N	N	0	0	1	13-5	0	Y	Y
5MT0948C	686620	4149010	ROB	T	875	HPS	P2L	Y	N	N	N	N	0	1	1	13-5	0	Y	Y
5MT0948D	686620	4149010	ROB	T	875	HPM	P3E	Y	Y	N	N	N	0	2	2	13-5	0	Y	Y
5MT0949	686200	4148870	M2CE	B	700	HPS	B3	N	N	N	N	N	0	0	1	13-96	0	Y	N
5MT0950	685550	4148190	M2DD	S	350	HPM	P3L	N	Y	N	N	N	2	1	2	13-73	0	Y	N
5MT0952A	685450	4147720	R7D	T	350	HPS	P3E	N	Y	N	N	N	1	1	1	10-8	0	Y	N
5MT0952B	685450	4147720	R7D	T	350	HPS	P3L	N	Y	N	N	N	1	1	1	10-8	0	Y	N
5MT0953A	685260	4147640	M2CE	S	0	HPM	P3E	N	N	N	N	Y	0	0	2	84-14-38	0	Y	N
5MT0953B	685260	4147640	M2CE	S	0	HPM	P3L	N	N	N	N	Y	0	0	2	84-14-38	0	Y	N
5MT0965	685380	4145180	M2CE	S	600	HT	PR	N	N	N	N	Y	0	0	0	6-24	0	?	N
5MT0967	685440	4145390	M2CE	S	800	HT	P3	Y	N	N	N	Y	0	0	0	6-30	0	Y	N
5MT0968	685350	4145320	M2DD	A	600	APFK,APLC,APV	P3	N	Y	N	N	N	10	0	0	6-27	0	Y	N
5MT0969A	685160	4145480	ROC	T	600	HT	P3	N	Y	N	N	N	3	0	0	6-34	0	Y	N
5MT0969B	685160	4145480	M2DD	S	600	APFK	P3L	Y	Y	N	N	N	1	0	0	6-34	0	Y	N
5MT0969C	685160	4145480	ROC	T	600	APFR	PR	Y	N	N	N	N	1	0	0	6-34	0	Y	N
5MT0969D	685160	4145480	ROC	T	600	APF	ANL	N	Y	N	N	N	15	0	0	6-34	0	Y	N
5MT0970A	685000	4145500	ROC	T	600	HPM	P2E	Y	N	N	N	N	10	2	2	6-35	0	Y	N
5MT0970B	685000	4145500	ROC	T	600	HPM	P3E	Y	N	N	N	N	10	2	2	6-35	0	Y	N
5MT0970C	685000	4145500	ROC	T	600	HPM	P2L	Y	N	N	N	N	10	2	2	6-35	0	Y	N
5MT0970D	685000	4145500	ROC	T	600	HPM	P3L	Y	N	N	N	N	10	2	2	6-35	0	Y	N
5MT0971A	685070	4145760	ROC	T	900	HPS	B3	N	N	N	N	N	0	1	1	6-41	0	Y	Y
5MT0971B	685070	4145760	ROC	T	900	HPS	P1E	N	N	N	N	N	0	1	1	6-41	0	Y	Y
5MT0971C	685070	4145760	ROC	T	900	HPS	P2E	N	N	N	N	N	0	1	1	6-41	0	Y	Y
5MT0972	684900	4145780	ROC	T	900	HPM	P2E	N	Y	N	N	N	0	2	2	6-42	0	Y	Y
5MT0986	684740	4145120	ROC	T	325	HPM	B3	N	Y	N	N	N	0	0	2	6-8	0	Y	N
5MT0987A	684720	4145020	ROC	T	300	HPS	B3	N	Y	N	N	N	4	0	1	6-7	0	Y	N
5MT0987B	684720	4145020	ROC	T	300	HTF	P2E	N	Y	N	N	N	4	0	0	6-7	0	Y	N
5MT0988	684350	4144670	ROC	T	300	APF,APLC	AN	N	Y	N	N	N	5	0	0	6-3	0	?	N
5MT0989	684220	4144590	R4C	T	500	HTF	P2	N	Y	N	N	N	1	0	0	5-25	0	Y	N
5MT0990	684290	4144780	ROC	S	350	HT	P2	N	Y	N	N	N	1	0	0	5-35	0	?	N
5MT0991	684430	4144770	ROC	S	450	A	ANL	N	Y	N	N	N	0	0	0	5-40	0	Y	N
5MT0992A	684540	4145360	R4C	T	550	HPS	P2E	Y	N	N	N	N	2	1	1	7-2	0	Y	N
5MT0992B	684540	4145360	R4C	T	550	HPS	P2L	Y	N	N	N	N	2	1	1	7-2	0	Y	N
5MT0993A	684480	4145300	R4C	T	500	HPM,AAD	P2E	Y	N	N	N	N	10	2	2	5-43	0	Y	N
5MT0993B	684480	4145300	R4C	T	500	HPM,AAD	P2L	Y	N	N	N	N	10	2	2	5-43	0	Y	N
5MT0994	684640	4145690	ROC	T	850	HPS	P2E	Y	N	N	N	N	28	1	1	7-5	0	Y	N
5MT0995A	684700	4145850	ROC	T	850	HPS	P2E	N	Y	N	N	N	7	0	1	9-14	0	Y	N
5MT0995B	684700	4145850	ROC	T	850	HPS	B3	N	Y	N	N	N	7	0	1	9-14	0	Y	N
5MT0996	684840	4145920	ROC	T	650	HPM	P2E	Y	Y	N	N	N	0	3	3	9-37	0	Y	N
5MT0997	684990	4146160	ROC	T	450	HPM	P1E	N	N	N	N	N	10	2	2	9-34	0	Y	Y

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT0998A	684320	4144480	M2DD	T	600	HPS	P2L	Y	Y	N	N	N	5	1	1	5-14	0	Y	N
5MT0998B	684320	4144480	M2DD	T	600	HPS	P3E	Y	Y	N	N	N	5	1	1	5-14	0	Y	N
5MT0998C	684320	4144480	M2DD	T	600	HPS	P3L	Y	Y	N	N	N	5	1	1	5-14	0	Y	N
5MT0999A	684100	4145380	ROC	T	325	HPS	P2L	Y	N	N	N	N	5	1	1	7-1	0	Y	N
5MT0999B	684100	4145380	ROC	T	325	HPS	P3E	Y	N	N	N	N	5	1	1	7-1	0	Y	N
5MT0999C	684100	4145380	ROC	T	325	HPS	P3L	Y	N	N	N	N	5	1	1	7-1	0	Y	N
5MT1000	683600	4145720	M2CE	S	0	HPM	P3L	Y	N	Y	N	N	0	10	20	-	7	Y	N
5MT1501	683830	4145480	R4C	B	300	AAD	ANL	N	Y	N	N	N	0	0	0	27-1	0	?	N
5MT1512	686060	4146060	M2CE	S	0	HPM,AAD	P3L	Y	N	Y	N	N	1	3	8	1-15	4	Y	N
5MT1515A	686650	4145890	M2CE	S	500	APLC	ARE	N	N	N	N	N	0	0	0	1-16	0	?	N
5MT1515B	686650	4145890	M2CE	S	500	APLC	P3	N	N	N	N	N	0	0	0	1-16	0	?	N
5MT1516	686700	4146000	M2DD	T	475	APLC,APF,APV	ANE	N	N	N	N	N	9	0	0	1-17	0	Y	N
5MT1517	686380	4146190	M2DD	S	150	A	P2	N	N	N	N	N	1	0	0	1-44	0	?	N
5MT1518	683050	4145560	M2C	S	500	APF,AAD,APFK	AN	N	N	N	N	N	3	0	0	27-11	0	Y	N
5MT1519	682660	4145570	M2DD	S	1,000	APLC	PR	N	N	N	N	Y	0	0	0	27-2	0	?	N
5MT1528	685150	4145800	ROC	T	900	APF	P2	N	Y	N	N	N	9	0	0	8-2	0	Y	N
5MT1529	685260	4146000	ROC	B	790	ASWR	ANL	N	Y	N	N	N	0	0	0	8-7	0	Y	N
5MT1530	685520	4146000	M2CE	S	700	HT	AN	N	N	N	N	Y	0	0	0	8-34	0	?	N
5MT1531A	685400	4146180	ROC	T	650	HPS	P2E	Y	Y	N	N	N	5	0	1	8-12	0	Y	N
5MT1531B	685400	4146180	ROC	T	650	HPM	P3E	Y	Y	N	N	N	5	3	3	8-12	1	Y	N
5MT1531C	685400	4146180	ROC	T	650	HPS	P2L	Y	Y	N	N	N	5	1	1	8-12	0	Y	N
5MT1531D	685400	4146180	ROC	T	650	HPM	P3L	Y	Y	N	N	N	5	3	3	8-12	1	0	N
5MT1532A	685280	4146280	ROC	S	500	HPS	B3	Y	N	N	N	N	23	0	1	8-13	0	Y	N
5MT1532B	685280	4146280	ROC	S	500	APF	ANL	N	Y	N	N	N	22	0	0	8-13	0	Y	N
5MT1533A	685360	4146500	ROC	S	450	HT?	ARL-B2	N	Y	N	N	N	7	0	0	8-14	0	Y	N
5MT1533B	685360	4146500	ROC	S	450	HT?	B3	N	Y	N	N	N	7	0	0	8-14	0	Y	N
5MT1534	685360	4146650	ROC	S	475	HPS	P1L	N	N	N	N	N	10	0	1	8-16	0	Y	N
5MT1536	685200	4146560	ROC	T	335	HPS	P2L	Y	N	N	N	N	16	1	1	9-33	0	Y	N
5MT1541A	683990	4146000	ROC	T	400	HPM	P3E	Y	N	N	N	N	4	9	15	9-1	1	Y	N
5MT1541B	683990	4146000	ROC	T	400	HPM	P3L	Y	N	N	N	N	4	9	15	9-1	1	Y	N
5MT1544A	684860	4146950	M2CE	S	1,100	HPM	P2L	Y	N	Y	N	Y	0	3	6	-	1	Y	N
5MT1544B	684860	4146950	M2CE	S	1,100	HPM	P3E	Y	N	Y	N	Y	0	3	6	-	1	Y	N
5MT1544C	684860	4146950	M2CE	S	1,100	HPM	P3L	Y	N	Y	N	Y	0	3	6	-	1	Y	N
5MT1548A	684640	4146450	M2DD	T	340	HPS	P2E	Y	N	N	N	N	0	0	1	9-29	0	Y	N
5MT1548B	684640	4146450	M2DD	T	340	HPS,AAD	P3E	Y	Y	N	N	N	3	1	1	9-29	0	Y	N
5MT1548C	684640	4146450	M2DD	T	340	HPS,AAD	P3L	Y	Y	N	N	N	0	0	1	9-29	0	Y	N
5MT1549A	686700	4147100	R4D	T	1,000	HPM	P3E	Y	N	N	N	N	2	2	3	1-1	0	Y	N
5MT1549B	686700	4147100	R4D	T	1,000	HPM	P3L	Y	N	N	N	N	2	2	3	1-1	0	Y	N
5MT1550A	686940	4147260	M2CE	S	1,300	HPM	P3E	Y	N	Y	N	Y	0	1	4	24-7	1	Y	N
5MT1550B	686940	4147260	M2CE	S	1,300	HPM	P3L	Y	N	Y	N	Y	0	1	4	24-7	1	Y	N
5MT1554A	686640	4146650	R4D	T	600	HPM	B3	N	N	N	N	N	10	0	4	1-27to36	0	Y	N
5MT1554B	686640	4146650	R4D	T	600	HT	P3E	N	N	N	N	N	0	0	0	1-27to36	0	?	N
5MT1558	686810	4146060	M2DD	T	600	A	AN	N	N	N	N	N	2	0	0	1-14	0	?	N
5MT1559	686750	4146160	M2DD	T	525	HPS	P2E	N	N	N	N	N	10	0	1	1-43	0	Y	N
5MT1560	686700	4147190	R4D	T	1,100	HPS	B3	N	N	N	N	N	0	0	1	24-13	0	Y	N
5MT1561A	686320	4147390	M2C	S	1,200	HPS	P2E	Y	N	N	N	Y	0	0	1	24-11	0	Y	N
5MT1561B	686320	4147390	M2C	S	1,200	HPS	P3L	Y	N	N	N	Y	0	0	1	24-11	0	Y	N
5MT1562	686800	4147300	M2C	S	1,100	APF	ANL	N	N	N	N	N	1	0	0	24-16	0	?	N
5MT1580	683500	4145050	M2DD	A	600	HPS	B3	Y	Y	N	N	N	5	0	1	27-26	0	Y	N
5MT1581	683590	4145090	R4C	T	60	HPS	P2E	Y	N	N	N	N	0	0	1	27-24	0	Y	N
5MT1583A	683720	4145120	R4C	A	600	HPS	P2E	Y	N	N	N	N	5	1	1	27-28	0	Y	N
5MT1583B	683720	4145120	R4C	A	600	HPS	P2L	Y	N	N	N	N	5	1	1	27-28	0	Y	N
5MT1583C	683720	4145120	R4C	A	600	HPS	P3E	Y	N	N	N	N	5	1	1	27-28	0	Y	N
5MT1583D	683720	4145120	R4C	A	600	HPS	P3L	Y	N	N	N	N	5	1	1	27-28	0	Y	N

SITE NUMBER	UTM ME		SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT1584	684150	4145640	ROC	B	500	A	P2E	N	Y	N	N	N	2	0	0	7-12	0	?	N
5MT1591	683540	4142800	M2DD	T	1,200	APLC	AN	N	Y	N	N	N	2	0	0	EEA	0	Y	T
5MT1593	684320	4143440	M2CE	S	520	ASFG	P3	N	N	N	N	N	0	0	0	-	0	Y	N
5MT1594	684420	4143490	M2CE	S	400	HT	P2	N	N	N	N	N	0	0	0	-	0	Y	N
5MT1595	684200	4143880	M2CE	S	50	HPM	P3L	Y	N	Y	Y	Y	0	5	10	5-1595	3	Y	N
5MT1596	686220	4148810	ROB	S	775	APF	PR	N	Y	N	N	N	1	0	0	13-95	0	?	N
5MT1597	687140	4148620	M2DD	S	240	APF	PR	N	Y	N	N	N	1	0	0	13-27	0	?	N
5MT1598A	686980	4148250	M2DD	S	175	HPS	P3L	Y	N	N	N	N	0	1	2	13-14	0	Y	N
5MT1598B	686980	4148250	M2DD	S	175	HPS	B3	N	N	N	N	N	0	0	1	13-14	0	Y	N
5MT1598C	686980	4148250	M2DD	S	175	HPM	P3E	Y	N	N	N	N	0	1	2	13-14	0	Y	N
5MT1599A	687160	4148320	M2DD	S	0	HPS	P2L	Y	N	N	N	Y	0	0	1	13-50	0	Y	N
5MT1599B	687160	4148320	M2DD	S	0	HPM	P3E	Y	N	N	N	Y	0	1	2	13-50	1	Y	N
5MT1599C	687160	4148320	M2DD	S	0	HPM	P3L	Y	N	N	N	Y	0	1	2	13-50	1	Y	N
5MT1601A	687110	4149110	ROC	T	400	HPM	P2L	Y	Y	N	N	N	0	1	2	MV3	0	Y	N
5MT1601B	687110	4149110	ROC	T	400	HPM	P3E	Y	Y	N	N	N	0	1	2	MV3	0	Y	N
5MT1602	686600	4148610	ROB	T	625	HPM	P3E	Y	N	N	N	N	0	2	2	13-4	1	Y	Y
5MT1604A	686740	4149150	ROB	T	150	HPM	B3	N	N	N	N	N	4	2	2		0	?	Y
5MT1604B	686740	4149150	ROB	T	150	HPM	P1E	N	N	N	N	N	4	3	3		0	?	Y
5MT1604C	686740	4149150	ROB	T	150	HPM	P1L	N	N	N	N	N	4	3	3		0	?	Y
5MT1604D	686740	4149150	ROB	T	150	HPM	P2E	N	N	N	N	N	3	4	4		0	?	Y
5MT1605	687100	4150150	M2DD	S	850	APF	ANL	N	Y	N	N	N	2	0	0	84-7-A	0	?	N
5MT1606A	687250	4150470	ROB	T	275	HPS	B3	N	Y	N	N	N	5	0	1		0	Y	N
5MT1606B	687250	4150470	ROB	T	275	HPS	P3E	Y	N	N	N	N	2	1	1		0	Y	N
5MT1606C	687250	4150470	ROB	T	275	HPS	P3L	Y	N	N	N	N	3	1	1		0	Y	N
5MT1607A	687180	4150020	ROB	T	700	HPM	P3E	Y	Y	N	N	N	0	2	3	-	0	Y	N
5MT1607B	687180	4150020	ROB	T	700	HPM	P3L	Y	Y	N	N	N	0	2	3	-	0	Y	N
5MT1609A	687400	4150600	ROB	T	600	HPS	P2L	Y	Y	N	N	N	0	0	1	-	0	Y	N
5MT1609B	687400	4150600	ROB	T	600	HPM	P3E	Y	Y	N	N	N	0	2	2	-	1	Y	N
5MT1609C	687400	4150600	ROB	T	600	HPM	P3L	Y	N	N	N	N	0	2	2	-	1	Y	N
5MT1610	687340	4152020	M2DD	S	720	HPM	P3E	Y	Y	N	N	N	0	1	2	-	1	Y	N
5MT1612	686830	4150380	M2DD	S	900	ACC	ANL	N	N	N	N	N	1	0	0	84-12-C	0	?	N
5MT1615	686750	4147920	V3C	S	580	APF,APLC	P2	N	N	N	N	Y	2	0	0	13-11	0	Y	N
5MT1616	686070	4147410	R7D	B	850	APF	ANL	N	N	N	N	N	4	0	0	13-33	0	N	N
5MT1617	686700	4147690	R4D	S	800	HPS	P2E	N	N	N	N	N	0	0	1	13-70	0	Y	N
5MT1618	686760	4147100	R4D	A	900	HPS	P1E	Y	Y	N	N	N	16	0	1	2-1	0	Y	N
5MT1619A	686140	4147220	M2C	T	950	HPM	P3E	Y	N	Y	N	N	0	1	2	24-5	0	Y	N
5MT1619B	686140	4147220	M2C	T	950	HPM	P3L	Y	N	Y	N	N	0	1	2	24-5	0	Y	N
5MT1620	686350	4147000	R4D	S	800	HPS	P1E	N	Y	N	N	N	0	0	1	2-14	0	Y	N
5MT1621	686450	4146860	V3C	T	650	HPS	P1E	N	N	N	N	N	2	0	1	2-15	0	Y	N
5MT1622	685970	4146570	M2C	S	400	HPM	P3L	Y	N	Y	Y	Y	0	2	4	2-24	2	Y	N
5MT1624A	685780	4147260	ROC	T	600	HPS	P1L	N	Y	N	N	N	0	1	1	24-3	0	Y	Y
5MT1624B	685780	4147260	ROC	T	600	HPS	P2E	N	Y	N	N	N	0	1	1	24-3	0	Y	Y
5MT1626A	687110	4148230	M2DD	S	150	HPS	P2L	Y	N	N	N	N	0	0	1	13-15	0	Y	N
5MT1626B	687110	4148230	M2DD	S	150	HPS	P3E	Y	N	N	N	N	0	0	1	13-15	0	Y	N
5MT3017	686630	4147130	R4D	T	1,025	HTF	P2	N	N	N	N	N	0	0	0	1-2	0	?	N
5MT3018	686650	4147040	R4D	T	900	APF	AN	N	N	N	N	N	1	0	0	1-3	0	?	N
5MT3019	686620	4147080	V3C	S	900	A	P3L	N	N	N	N	N	0	0	0	1-4	0	N	N
5MT3020	686665	4147070	R4D	T	1,000	A	ANL	N	N	N	N	N	1	0	0	1-5	0	?	N
5MT3021	686690	4147030	R4D	T	950	A	ANL	N	N	N	N	N	1	0	0	1-6	0	?	N
5MT3022	686690	4146990	R4D	T	925	A	P3	N	N	N	N	N	1	0	0	1-7	0	?	N
5MT3023	686740	4146920	M2DD	S	900	APLC	PR	N	N	N	N	N	0	0	0	1-8	0	N	N
5MT3024	686720	4146970	M2DD	T	900	HTF	P2	N	N	N	N	N	0	0	0	1-9	0	?	N
5MT3025	686740	4146870	M2DD	T	850	ASC	PR	N	N	N	N	N	0	0	0	1-10	0	N	N
5MT3026	686390	4146020	M2DD	T	300	A	AN	N	N	N	N	N	0	0	0	1-11	0	N	N

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT3027	686910	4146060	M2CE	S	700	APLC	PR	N	N	N	N	N	0	0	0	1-12	0	?	N
5MT3028	686840	4146000	M2CE	S	650	A	ANL	N	N	N	N	N	1	0	0	1-13	0	?	N
5MT3029	686500	4145940	M2DD	T	350	HPM	B3	N	N	N	N	N	10	0	2	1-18	0	Y	N
5MT3030	686030	4145890	M2DD	S	400	AAD	ANL	N	N	N	N	N	0	0	0	1-19	0	?	N
5MT3031	686130	4145880	M2DD	S	375	APLC	ARM	N	N	N	N	N	0	0	0	1-20	0	?	N
5MT3032	686140	4145930	M2DD	S	300	HTF	ANE	N	N	N	N	N	1	0	0	1-21	0	?	N
5MT3033	685920	4145910	M2CE	S	425	ASFG	P3	N	N	Y	N	Y	0	0	0	1-22	0	Y	N
5MT3034	685940	4145850	M2CE	B	400	AC	P3	N	N	Y	N	N	0	0	0	1-23	1	Y	N
5MT3035	686000	4145980	M2CE	A	300	APLC	ARM	N	N	N	N	N	0	0	0	1-24	0	?	N
5MT3036A	686600	4146760	R4D	T	650	HPM	P1L	N	N	N	N	N	0	0	2	1-25	0	Y	N
5MT3036B	686600	4146760	R4D	T	650	HPM	P2E	N	N	N	N	N	0	1	2	1-25	0	Y	N
5MT3037	686680	4146760	M2DD	A	700	APF,APLC	P3L	N	N	N	N	N	11	0	0	1-26	0	?	N
5MT3039	686590	4146590	R4D	S	575	HTF	P2	N	N	N	N	N	0	0	0	1-31	0	Y	N
5MT3040	686570	4146640	R4D	S	525	A	ANL	N	N	N	N	N	1	0	0	1-32	0	?	N
5MT3041	686560	4146660	R4D	S	600	A	PR	N	N	N	N	N	1	0	0	1-33	0	?	N
5MT3043	686590	4146690	R4D	S	650	A	PR	N	N	N	N	N	1	0	0	1-35	0	?	N
5MT3045	686680	4146830	R4D	S	850	A	PR	N	N	N	N	N	1	0	0	1-37	0	?	N
5MT3046	686670	4146500	M2DD	T	550	HT	P2	N	N	N	N	N	0	0	0	1-38	0	?	N
5MT3047	686660	4146460	M2DD	T	550	A	ANL	N	N	N	N	N	0	0	0	1-39	0	?	N
5MT3048	686690	4146440	R4D	A	400	HPM	P1E	N	N	N	N	N	0	0	3	1-40	0	Y	N
5MT3049A	686760	4146390	M2DD	A	550	HPM	P1E	N	N	N	N	N	10	0	2	1-41	0	Y	N
5MT3049B	686760	4146390	M2DD	S	550	HT	ANL	N	N	N	N	N	0	0	0	1-41	0	?	N
5MT3050A	686740	4146370	M2DD	T	500	HPM	B3	N	N	N	N	N	10	0	2	1-42	0	Y	N
5MT3050B	686740	4146370	M2DD	T	500	HPS	P2L	N	N	N	N	N	10	0	1	1-42	0	Y	N
5MT3050C	686740	4146370	M2DD	T	500	A	P3	N	N	N	N	N	0	0	0	1-42	0	?	N
5MT3051	686240	4146220	M2CE	B	50	AAD	AN	N	N	N	N	N	0	0	0	1-45	0	?	N
5MT3052	686640	4147130	R4D	T	950	HPS	HA	Y	N	N	N	N	0	0	1	2-2	0	?	N
5MT3053	685980	4147060	M2C	T	900	HTF	P2	N	Y	N	N	N	0	0	0	2-3	0	?	N
5MT3054	685930	4147020	R4D	S	825	HT	P3	Y	N	N	N	N	0	0	0	2-4	0	Y	N
5MT3055	685790	4147050	M2C	T	975	A	AN	N	N	N	N	N	3	0	0	2-5	0	?	N
5MT3056	685760	4147060	M2C	B	1,000	APFR	PR	N	N	N	N	N	1	0	0	2-6	0	?	N
5MT3057A	685840	4147020	M2C	T	850	APLC,APV	AN	N	N	N	N	N	0	0	0	2-7	0	?	N
5MT3057B	685840	4147020	M2C	T	850	AHB	H	N	N	N	N	N	0	0	0	2-7	0	?	N
5MT3058	686230	4147030	ROC	T	800	APF	P3	N	Y	N	N	N	1	0	0	2-8	0	?	N
5MT3059	685910	4146980	R4D	S	750	HPM	P3L	Y	N	N	N	N	3	1	2	2-9	1	Y	N
5MT3060A	685870	4146940	R4D	S	750	HPM,AAD	P3E	Y	N	N	N	N	0	1	2	2-10	0	Y	N
5MT3060B	685870	4146940	R4D	S	750	HPM,AAD	P3L	Y	N	N	N	N	0	1	2	2-10	0	Y	N
5MT3061	685730	4146900	M2C	S	850	APLC	ARM	N	N	N	N	N	0	0	0	2-11	0	?	N
5MT3062A	685840	4146890	R4D	A	750	HPS	B3	Y	Y	N	N	N	7	1	1	2-12	0	Y	N
5MT3062B	685840	4146890	R4D	S	750	HTF	P2	Y	Y	N	N	N	3	0	0	2-12	0	?	N
5MT3063	685760	4146800	M2CE	S	750	APLC	PR	N	N	N	N	N	0	0	0	2-13	0	?	N
5MT3064	686400	4146880	R4D	T	625	HTF,AAD	P3	N	N	N	N	N	3	0	0	2-16	0	?	N
5MT3065	686270	4146810	ROC	T	600	HPS	B3	N	Y	N	N	N	0	0	1	2-17	0	Y	N
5MT3066	685670	4146690	M2C	T	625	HPS	B3	N	N	N	N	N	2	0	1	2-18	0	Y	N
5MT3067	685770	4146680	M2C	S	725	APF,APLC	PR	N	N	N	N	N	3	0	0	2-19	0	?	N
5MT3068	685890	4146720	M2CE	S	725	APF,APLC	PR	N	N	N	N	N	2	0	0	2-20	0	?	N
5MT3069	685920	4146600	M2C	T	500	APLC	PR	N	N	N	N	N	0	0	0	2-21	0	?	N
5MT3070	686680	4146650	R4D	T	450	HT	B3	N	N	N	N	N	2	0	0	2-22	0	?	N
5MT3071	686260	4146670	ROC	S	450	HTF	P2	N	Y	N	N	N	1	0	0	2-23	0	?	N
5MT3072	686170	4146600	R4D	S	400	HPM	B3	N	N	N	N	N	9	0	2	2-25	0	Y	N
5MT3073	686200	4146590	R4D	S	350	HTF	ANL	N	N	N	N	N	0	0	0	2-26	0	?	N
5MT3074	685670	4146500	M2C	S	600	APF,APLC	PR	N	N	N	N	N	2	0	0	2-27	0	?	N
5MT3075	686160	4146540	R4D	B	500	HT	ANL	N	N	N	N	N	4	0	0	2-28	0	Y	N
5MT3076	686110	4146570	M2C	S	325	APFR	ARM	N	N	N	N	N	1	0	0	2-29	0	Y	N

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT3077	686060	4146590	M2C	S	400	APLC	PR	N	N	N	N	N	0	0	0	2-30	0	?	N
5MT3078	685990	4146680	M2C	S	600	HT	AN	Y	N	N	N	N	4	0	0	2-31	0	?	N
5MT3079	686400	4146530	R4D	S	375	HTF	P2E	N	N	N	N	N	0	0	0	2-32	0	?	N
5MT3080	686380	4146470	R4D	B	450	AAD	ANL	N	N	N	N	N	0	0	0	2-33	0	N	N
5MT3081	686350	4146400	R4D	S	400	ASWR	HA	N	N	N	N	N	0	0	0	2-34	0	?	N
5MT3082	686260	4146470	R4D	S	400	HPS	P2E	N	N	N	N	N	1	0	1	2-35	0	Y	N
5MT3083A	686200	4146430	R4D	T	300	HPM,AAD	P3E	Y	N	N	N	N	1	1	2	2-36	0	Y	N
5MT3083B	686200	4146430	R4D	T	300	HPM,AAD	P3L	Y	N	N	N	N	0	1	2	2-36	0	Y	N
5MT3084	686140	4146470	M2C	A	400	APLC	AN	N	N	N	N	N	0	0	0	2-37	0	?	N
5MT3085	685720	4146450	M2C	T	500	APF	ANL	N	N	N	N	N	1	0	0	2-38	0	?	N
5MT3086	686200	4146370	R4D	S	150	HT	H	N	N	N	N	N	0	0	0	2-39	0	?	N
5MT3087	685890	4146430	R4D	T	300	APLC	PR	N	N	N	N	N	0	0	0	2-40	0	?	N
5MT3088	686180	4146320	M2DD	S	100	APF,APLC	PR	N	N	N	N	N	2	0	0	2-41	0	?	N
5MT3089	686100	4146270	R4D	S	110	APF	AN	N	N	N	N	N	1	0	0	2-42	0	?	N
5MT3090A	686190	4146230	M2CE	S	50	APF,APLC	ARM	N	N	N	N	N	1	0	0	2-43	0	?	N
5MT3090B	686190	4146230	M2CE	S	50	APF,APLC	P3	N	N	N	N	N	1	0	0	2-43	0	?	N
5MT3091	686000	4146220	M2DD	S	300	APLC	PR	N	N	N	N	N	1	0	0	2-44	0	?	N
5MT3092	685860	4146060	M2C	T	350	APF,APLC	PR	N	N	N	N	N	3	0	0	2-45	0	?	N
5MT3093	685880	4146230	M2DD	A	350	ALR	H	N	N	N	N	N	0	0	0	2-46	0	?	N
5MT3094	685940	4146030	M2CE	S	350	HT	H	N	N	N	N	Y	1	0	0	2-47	0	?	N
5MT3095	685940	4146330	R4D	S	350	APV,APLC	PR	N	N	N	N	N	0	0	0	2-48	0	?	N
5MT3096	685810	4146180	M2C	S	500	APF,APV,APLC	PR	N	N	N	N	N	1	0	0	2-49	0	?	N
5MT3097	686160	4146200	M2CE	B	140	ASWR	HA	N	N	N	N	N	0	0	0	2-50	0	?	N
5MT3098	685990	4146080	M2CE	S	400	HT	PR	N	N	N	N	Y	0	0	0	2-51	0	?	N
5MT3099	686090	4146140	M2CE	S	150	APLC	ARM	N	N	N	N	N	0	0	0	2-52	0	Y	N
5MT3100	684950	4144290	R7D	T	500	HTF	P3E	N	Y	N	N	N	1	0	0	3-2	0	Y	N
5MT3101	684900	4144360	R7D	T,S	400	HPS	B3	N	Y	N	N	N	20	0	1	3-3	0	Y	N
5MT3102A	684640	4144250	R7D	S	400	A	ANE	N	Y	N	N	N	3	0	0	3-4	0	?	N
5MT3102B	684640	4144250	R7D	S	400	A	ANL	N	Y	N	N	N	2	0	0	3-4	0	?	N
5MT3103	684840	4144480	R7D	T	400	HPS	P2E	N	Y	N	N	N	1	0	1	3-5	0	Y	N
5MT3104	684710	4144060	R7D	S	400	A	P2	N	Y	N	N	N	3	0	0	3-6	0	?	N
5MT3105	684900	4144060	ROC	S	520	HPS	B3	N	Y	N	N	N	3	0	1	3-7	0	Y	N
5MT3106	684910	4143950	R7D	T	600	HTF	P2	N	Y	N	N	N	1	0	0	3-9	0	?	N
5MT3107	684980	4143880	M2CE	S	630	A	AN	N	N	N	N	Y	0	0	0	3-10	0	?	N
5MT3108	684980	4143750	R7D	T	700	HPS?	B3	N	Y	N	N	N	1	0	1	3-12	0	?	N
5MT3109	684945	4143690	ROC	S	600	HTF?	ANE	N	Y	N	N	N	3	0	0	3-13	0	?	N
5MT3110	684890	4143670	ROC	S	600	A	PR	N	Y	N	N	N	1	0	0	3-14	0	?	N
5MT3111	684960	4143590	ROC	S	675	HPS?	B3	N	Y	N	N	N	8	0	1	3-15	0	?	N
5MT3112	684730	4143550	R7D	S	500	APV	ANL	N	Y	N	N	N	2	0	0	3-16	0	?	N
5MT3113	684830	4143460	ROC	T	600	HPS	B3	N	Y	N	N	N	13	0	1	3-17	0	Y	N
5MT3114A	684760	4143290	ROC	T	725	APF	B3	N	Y	N	N	N	2	0	0	3-18	0	?	N
5MT3114B	684760	4143290	ROC	T	725	A	P2	N	Y	N	N	N	1	0	0	3-18	0	?	N
5MT3115	684735	4143150	ROC	S	850	APF	B3	N	Y	N	N	N	2	0	0	3-19	0	?	N
5MT3116	684730	4143080	ROC	T	850	APF	ANL	N	Y	N	N	N	8	0	0	3-20	0	?	N
5MT3117	684740	4142890	ROC	T	1,000	HT	B3	N	Y	N	N	N	4	0	0	3-22	0	Y	N
5MT3118	684770	4143130	M2CE	S	900	ASFG	AN	N	N	N	N	Y	0	0	0	3-24	0	?	N
5MT3119	684710	4142690	M2CE	S	1,100	HT	AN	N	N	N	N	Y	0	0	0	3-27	0	Y	N
5MT3120	684810	4142960	M2CE	S	1,100	A	PR	N	N	N	N	Y	0	0	0	3-28	0	?	N
5MT3121	684820	4142920	M2CE	S	1,100	APCQ	PR	N	N	N	N	Y	0	0	0	3-29	0	?	N
5MT3122	684640	4142650	M2DD	A	1,300	APLC	AN	N	Y	N	N	N	0	0	0	3-30	0	?	N
5MT3123	684600	4142750	M2DD	S	1,200	HTF	P3E	N	Y	N	N	N	1	0	0	4-1	0	?	N
5MT3124	684130	4142690	M2CE	S	1,300	HT	P3	N	N	N	N	Y	0	0	0	4-2	0	Y	N
5MT3125	684000	4142770	M2DD	T	1,300	APLC	PR	N	Y	N	N	N	0	0	0	4-3	0	N	N
5MT3126	684500	4142760	M2DD	T	1,200	APF,APLC	PR	N	Y	N	N	N	0	0	0	4-4	0	?	N

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT3127	684490	4142790	M2DD	T	1,200	APLC	PR	N	Y	N	N	N	4	0	0	4-5	0	?	N
5MT3128	684450	4142810	M2DD	T	1,200	APF,APLC,APV	PR	N	Y	N	N	N	2	0	0	4-6	0	?	N
5MT3129	684390	4142800	M2DD	S	1,200	AAD	AN	N	Y	N	N	N	2	0	0	4-7	0	?	N
5MT3130A	684490	4142900	ROC	T	1,000	HPM	B3	N	Y	N	N	N	8	0	3	4-8	0	Y	N
5MT3130B	684490	4142900	ROC	T	1,000	APF	ANL	N	Y	N	N	N	2	0	0	4-8	0	Y	N
5MT3131	684470	4142830	ROC	T	1,100	APV,APLC	PR	N	Y	N	N	N	0	0	0	4-9	0	?	N
5MT3132	684590	4142880	ROC	T	1,050	APF	PR	N	Y	N	N	N	0	0	0	4-10	0	?	N
5MT3133	684390	4142900	ROC	S	980	HTF	ANL	N	Y	N	N	N	0	0	0	4-11	0	?	N
5MT3134	684500	4142960	R7D	S	930	HPS	B3	N	Y	N	N	N	7	0	1	4-12	0	Y	N
5MT3135	684450	4143030	R7D	S	880	APF	PR	N	Y	N	N	N	1	0	0	4-13	0	?	N
5MT3136	684490	4143270	M2DD	S	670	APFK	P3L	N	Y	N	N	N	2	0	0	4-14	0	Y	N
5MT3137	684460	4143380	M2DD	B	500	ASWR	ANL	N	Y	N	N	N	0	0	0	4-15	0	Y	N
5MT3138	684550	4143610	M2DD	S	375	APFK?	AN	N	Y	N	N	N	2	0	0	4-16	0	Y	N
5MT3139	684680	4143670	R7D	B	400	AAD	AN	N	Y	N	N	N	1	0	0	4-17	0	N	N
5MT3140A	684550	4143780	M2DD	T	250	APLC	ARM	N	Y	N	N	N	6	0	0	4-18	0	Y	N
5MT3140B	684550	4143780	M2DD	T	250	APLC	ARL-B2	N	Y	N	N	N	3	0	0	4-18	0	Y	N
5MT3141	683950	4144480	M2C	S	520	HT	ANL	N	N	N	N	Y	1	0	0	5-1	0	?	N
5MT3142	683950	4144610	M2C	S	420	HT	P3	N	N	N	N	Y	0	0	0	5-2	0	?	N
5MT3143	683940	4144630	M2C	S	400	HT	P3	N	N	N	N	Y	0	0	0	5-3	0	?	N
5MT3144	683930	4144660	M2C	S	350	HT	P3	N	N	N	N	Y	0	0	0	5-4	0	?	N
5MT3145	684458	4144490	ROC	T	600	HPS	P1E	N	Y	N	N	N	2	0	1	5-5	0	Y	N
5MT3146	684430	4144440	ROC	T	570	HT	P2	N	Y	N	N	N	1	0	0	5-6	0	?	N
5MT3147A	684390	4144440	ROC	T	580	APF	B3	N	N	N	N	N	1	0	0	5-7	0	?	N
5MT3147B	684390	4144440	ROC	T	580	APF	P3	N	N	N	N	N	2	0	0	5-7	0	?	N
5MT3148	684410	4144390	ROC	T	500	APF	P3	N	Y	N	N	N	1	0	0	5-8	0	?	N
5MT3149	684480	4144290	ROC	S	450	APF	ANL	N	Y	N	N	N	3	0	0	5-9	0	Y	N
5MT3150	684490	4144260	ROC	S	400	APF	ANL	N	Y	N	N	N	3	0	0	5-10	0	?	N
5MT3151	684480	4144210	R7D	S	375	APF	AN	N	Y	N	N	N	1	0	0	5-11	0	?	N
5MT3152	684410	4144250	ROC	S	325	A	PR	N	Y	N	N	N	0	0	0	5-12	0	?	N
5MT3153	684360	4144380	ROC	T	450	APF	ANL	N	Y	N	N	N	1	0	0	5-13	0	?	N
5MT3154	684340	4144210	ROC	T	280	HT	ANL	N	Y	N	N	N	1	0	0	5-15	0	?	N
5MT3155	684320	4144190	ROC	T	270	HT	P2	N	Y	N	N	N	2	0	0	5-16	0	?	N
5MT3156	684280	4144190	ROC	T	270	APF	ANL	N	Y	N	N	N	1	0	0	5-17	0	?	N
5MT3157	684240	4144190	M2DD	T	270	APF	ANL	N	Y	N	N	N	5	0	0	5-18	0	?	N
5MT3158	684360	4144320	ROC	S	400	APF	P3	N	Y	N	N	N	1	0	0	5-19	0	?	N
5MT3159	684160	4144200	M2DD	T	300	HT	P3	N	Y	N	N	N	3	0	0	5-20	0	?	N
5MT3160	684240	4144450	M2DD	T	520	A	AN	N	Y	N	N	N	0	0	0	5-21	0	?	N
5MT3161	684250	4144510	M2DD	S	570	APF	ANL	N	Y	N	N	N	1	0	0	5-22	0	?	N
5MT3162	684220	4144280	ROC	S	375	HT,AAD	P2	N	Y	N	N	N	1	0	0	5-23	0	?	N
5MT3163	684340	4144560	ROC	T	550	APF	P2	Y	N	N	N	N	1	0	0	5-24	0	?	N
5MT3164	683980	4144280	M2DD	T	500	APLC	PR	N	Y	N	N	N	0	0	0	5-26	0	N	N
5MT3165	684020	4144320	M2DD	T	500	A	PR	N	Y	N	N	N	0	0	0	5-27	0	?	N
5MT3166	684260	4144520	M2DD	T	500	HT	P3	N	Y	N	N	N	4	0	0	5-28	0	?	N
5MT3167A	684260	4144520	ROC	T	600	A	B3	N	Y	N	N	N	0	0	0	5-29	0	?	N
5MT3167B	684260	4144520	ROC	T	600	A	P3	N	Y	N	N	N	0	0	0	5-29	0	?	N
5MT3168	684080	4144570	M2DD	B	450	AAD	AN	N	Y	N	N	N	0	0	0	5-30	0	N	N
5MT3169	684200	4144650	R4C	A	410	A	ANL	N	Y	N	N	N	0	0	0	5-31	0	?	N
5MT3170	684040	4144670	M2DD	B,T	350	APFK	AN	N	Y	N	N	N	2	0	0	5-32	0	?	N
5MT3171	683990	4144690	M2C	B	320	AAD	AN	N	N	N	N	N	0	0	0	5-33	0	?	N
5MT3172	683970	4144770	M2DD	T	270	APFR	AN	N	Y	N	N	N	1	0	0	5-34	0	?	N
5MT3173A	684200	4144920	R4C	T	200	HPS?	B3	N	Y	N	N	N	0	0	1	5-36	0	Y	N
5MT3173B	684200	4144920	R4C	T	200	HPS?	P1	N	Y	N	N	N	0	0	1	5-36	0	Y	N
5MT3173C	684200	4144920	R4C	T	200	HPM	P2L	Y	Y	Y	N	N	0	1	2	5-36	0	Y	Y
5MT3173D	684200	4144920	R4C	T	200	HT	P3	N	Y	N	N	N	0	0	0	5-36	0	Y	N

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT3174	684500	4144670	ROC	T	580	HTF	P2	N	Y	N	N	N	2	0	0	5-37	0	?	N
5MT3175	684040	4144620	M2DD	S	400	ASFC	P2	N	Y	N	N	N	2	0	0	5-38	0	?	N
5MT3176	684270	4144850	ROC	S	300	A	PR	N	Y	N	N	N	0	0	0	5-39	0	?	N
5MT3177A	684610	4145280	ROC	T	500	HPS	B3	N	Y	N	N	N	12	0	1	5-41	0	Y	N
5MT3177B	684610	4145280	ROC	T	500	A	ANL	N	Y	N	N	N	0	0	0	5-41	0	Y	N
5MT3178	684670	4145100	ROC	T	575	HT	P2	N	Y	N	N	N	0	0	0	5-42	0	?	N
5MT3179	684290	4145260	ROC	T	350	HT	P2	N	Y	N	N	N	4	0	0	5-44	0	?	N
5MT3180A	684050	4145260	ROC	T	200	HPS	B3	N	N	N	N	N	0	0	1	5-45	0	Y	N
5MT3180B	684050	4145260	ROC	T	200	A	ANL	N	N	N	N	N	0	0	0	5-45	0	Y	N
5MT3181	683970	4145120	M2DD	T	100	APF	ANL	N	N	N	N	N	1	0	0	5-46	0	?	N
5MT3182	684050	4145040	M2DD	A	10	APF	ANL	N	Y	N	N	N	2	0	0	5-47	0	?	N
5MT3183	684110	4145120	R4C	B	150	A	AN	N	N	N	N	N	1	0	0	5-48	0	?	N
5MT3184	683940	4145200	R4C	T	200	A	ANL	N	N	N	N	N	0	0	0	5-49	0	?	N
5MT3185	684140	4145290	R4C	B	300	APF	PR	N	Y	N	N	N	1	0	0	5-50	0	?	N
5MT3186	683950	4145290	ROC	T	280	A	AN	N	Y	N	N	N	0	0	0	5-51	0	?	N
5MT3187	684790	4144550	R7D	A	300	HTF	P3E	N	N	N	N	N	5	0	0	6-1	0	Y	N
5MT3188	684950	4144640	R7D	S	300	HTF	P2	N	Y	N	N	N	6	0	0	6-2	0	Y	N
5MT3189	684980	4144930	M2DD	S	50	APF,APLC	P2	N	Y	N	N	N	4	0	0	6-4	0	?	N
5MT3190	684800	4144840	ROC	S	200	ACS,APF	P3	Y	N	N	N	N	4	0	0	6-5	0	?	N
5MT3191	684650	4144780	ROC	S	400	HT	PR	N	Y	N	N	N	0	0	0	6-6	0	?	N
5MT3192	685110	4145070	M2CE	T	200	HTF	P2	N	Y	N	N	N	0	0	0	6-9	0	?	N
5MT3193	685080	4145100	M2CE	S	300	HTF	P2	N	N	N	N	N	1	0	0	6-10	0	?	N
5MT3194	685090	4145150	M2DD	S	350	APF	PR	N	Y	N	N	N	0	0	0	6-11	0	?	N
5MT3195	685090	4145060	M2DD	S	320	HT	ANL	N	Y	N	N	N	0	0	0	6-12	0	?	N
5MT3196	685000	4145060	M2DD	S	175	APF,APFR	ANE	N	Y	N	N	N	11	0	0	6-13	0	Y	N
5MT3197A	684850	4145080	R7D	A	300	HT	ANE	N	Y	N	N	N	11	0	0	6-14	0	Y	N
5MT3197B	684850	4145080	R7D	A	300	APF	P3	N	Y	N	N	N	3	0	0	6-14	0	Y	N
5MT3198	685000	4145100	M2DD	S	200	HT	ANE	N	Y	N	N	N	0	0	0	6-15	0	Y	N
5MT3199	685190	4145100	M2CE	S	300	HT	P3L	N	N	N	N	Y	0	0	0	6-16	0	?	N
5MT3200	684580	4144770	ROC	S	400	APF	P2	N	N	N	N	N	3	0	0	6-17	0	?	N
5MT3201	685050	4144550	M2CE	S	300	HT	P3L	N	N	N	N	Y	0	0	0	6-18	0	Y	N
5MT3202	685050	4144740	M2CE	S	100	HT	PR	N	N	N	N	Y	0	0	0	6-19	0	Y	N
5MT3203	685050	4144870	M2CE	S	40	A	P3	N	N	N	N	Y	0	0	0	6-20	0	Y	N
5MT3204	685090	4144940	M2CE	S	120	ASFG	P2	N	N	N	N	Y	0	0	0	6-21	0	?	N
5MT3205	685160	4145000	M2CE	S	200	HT	P3E	N	N	N	N	Y	0	0	0	6-22	0	Y	N
5MT3206	685170	4145060	M2CE	S	350	ACS?	ANE	N	N	N	N	Y	0	0	0	6-23	0	?	N
5MT3207	685450	4145340	M2CE	S	650	HT	ANL	N	N	N	N	Y	0	0	0	6-25	0	?	N
5MT3208A	684930	4145190	R7D	S	400	APF	ANE	N	Y	N	N	N	4	0	0	6-26	0	?	N
5MT3208B	684930	4145190	R7D	S	400	APF	ANL	N	Y	N	N	N	4	0	0	6-26	0	?	N
5MT3209A	685070	4145300	R7D	A	600	HT	ANE	N	Y	N	N	N	6	0	0	6-28	0	Y	N
5MT3209B	685070	4145300	R7D	A	600	APF,APLC	ANE	N	Y	N	N	N	6	0	0	6-28	0	Y	N
5MT3209C	685070	4145300	R7D	A	600	HT	ANL	N	Y	N	N	N	6	0	0	6-28	0	Y	N
5MT3209D	685070	4145300	R7D	A	600	APF,APLC	ANL	N	Y	N	N	N	6	0	0	6-28	0	Y	N
5MT3210	684740	4145340	ROC	S	600	APF,APV	AN	N	N	N	N	N	6	0	0	6-29	0	?	N
5MT3211	684930	4145420	ROC	S	550	APF	ANL	N	Y	N	N	N	3	0	0	6-31	0	?	N
5MT3212	685110	4145360	R7D	T	500	APF,APV	AN	N	Y	N	N	N	2	0	0	6-32	0	?	N
5MT3213	685250	4145410	M2DD	S	600	HT	ANL	N	Y	N	N	N	4	0	0	6-33	0	?	N
5MT3214A	684860	4145500	ROC	T	400	HPS	B3	N	N	N	N	N	18	0	1	6-36	0	Y	N
5MT3214B	684860	4145500	ROC	T	400	APF	ANL	N	N	N	N	N	3	0	0	6-36	0	Y	N
5MT3215	684800	4145480	ROC	T	650	APF	ANL	N	N	N	N	N	3	0	0	6-37	0	?	N
5MT3216A	685200	4145640	ROC	A	750	HT	ANL	N	N	N	N	N	12	0	0	6-38	0	Y	N
5MT3216B	685200	4145640	ROC	A	750	HPS	B3	N	N	N	N	N	13	0	1	6-38	0	Y	N
5MT3217	685200	4145740	ROC	S	800	HPS	P3E	Y	N	N	N	N	5	1	2	6-39	1	Y	Y
5MT3218	685300	4145760	ROC	S	900	A	ANL	N	N	N	N	N	6	0	0	6-40	0	?	N

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT3219	685420	4145740	M2C	S	900	HT	P3	N	N	Y	N	Y	0	0	0	6-43	0	Y	N
5MT3220	685500	4145560	M2C	S	750	APF	ANL	N	N	N	N	N	7	0	0	6-44	0	?	N
5MT3221	685420	4145610	M2C	S	850	A	P1L	N	N	N	N	N	3	0	0	6-45	0	?	N
5MT3222	684760	4145530	ROC	T	720	A	AN	N	N	N	N	N	0	0	0	7-3	0	?	N
5MT3223	684740	4145590	ROC	B	800	A	ANL	N	Y	N	N	N	1	0	0	7-4	0	N	N
5MT3224	684280	4145700	ROC	T	600	HPM	P2E	Y	N	N	N	N	30	1	2	7-6	0	Y	N
5MT3225	684400	4145430	ROC	T	520	APF	P2	N	Y	N	N	N	1	0	0	7-7	0	?	N
5MT3226	684320	4145570	ROC	T	600	HTF	P3	N	Y	N	N	N	1	0	0	7-8	0	?	N
5MT3227	684120	4145530	ROC	S	500	ASFC	P2	N	N	N	N	N	1	0	0	7-9	0	?	N
5MT3228	683930	4145480	ROC	B	350	A	P2	N	Y	N	N	N	2	0	0	7-10	0	?	N
5MT3229	683960	4145260	R4C	A	300	A	P3	N	Y	N	N	N	10	0	0	7-11	0	?	N
5MT3230	684480	4145510	ROC	T	600	HTF	P3	N	Y	N	N	N	1	0	0	7-13	0	?	N
5MT3231A	684460	4145720	ROC	T	800	A	P2	N	Y	N	N	N	10	0	0	7-14	0	Y	N
5MT3231B	684460	4145720	ROC	T	800	A	P3	N	Y	N	N	N	10	0	0	7-14	0	Y	N
5MT3232	684970	4145860	ROC	T	850	HPS	P2E	N	Y	N	N	N	2	1	1	8-1	0	Y	Y
5MT3233	685220	4145830	ROC		925	APF	PR	N	Y	N	N	N	2	0	0	8-3	0	?	N
5MT3234	685250	4145880	ROC		900	A	PR	N	Y	N	N	N	1	0	0	8-4	0	?	N
5MT3235	685200	4145850	ROC	B	900	APF	P3	N	Y	N	N	N	4	0	0	8-5	0	?	N
5MT3236	685050	4145910	ROC	S	800	APF	B3	N	Y	N	N	N	2	0	0	8-6	0	?	N
5MT3237	685340	4145980	M2CE	S	825	APLC	AN	N	Y	N	N	N	1	0	0	8-8	0	?	N
5MT3238	685330	4145960	M2CE	S	850	APF	ANE	N	Y	N	N	N	3	0	0	8-9	0	?	N
5MT3239	685200	4146020	ROC	B	750	A	ANL	N	Y	N	N	N	1	0	0	8-10	0	?	N
5MT3240	685210	4146060	ROC	S	700	HPS	P2L	N	Y	N	N	N	2	0	1	8-11	0	Y	N
5MT3241	685340	4146590	ROC	S	450	HTF	ANL	N	N	N	N	N	2	0	0	8-15	0	?	N
5MT3242	685380	4146700	ROC	S	500	APF	AN	N	N	N	N	N	5	0	0	8-17	0	?	N
5MT3243	685430	4146740	ROC	S	550	APF	AN	N	N	N	N	N	2	0	0	8-18	0	?	N
5MT3244	685440	4146810	ROC	S	580	APF	PR	N	N	N	N	N	6	0	0	8-19	0	?	N
5MT3245A	685470	4146540	M2CE	S	600	HT	ANE	N	N	N	N	Y	0	0	0	8-20	0	Y	N
5MT3245B	685470	4146540	M2CE	S	600	HT	ANL	N	N	N	N	Y	0	0	0	8-20	0	Y	N
5MT3246	685500	4146620	M2CE	S	625	APFR	PR	Y	N	N	N	N	2	0	0	8-21	0	?	N
5MT3247	685530	4146640	M2C	S	650	APLC	AN	N	N	N	N	N	0	0	0	8-22	0	?	N
5MT3248	685520	4146680	M2CE	S	650	APF,APLC, APV	P2	N	N	N	N	N	5	0	0	8-23	0	?	N
5MT3249	685520	4146740	M2CE	S	650	APF,APV	ARM	N	N	N	N	N	2	0	0	8-24	0	Y	N
5MT3250	685610	4146820	M2CE	S	750	HT	P2	N	N	N	N	Y	0	0	0	8-25	0	Y	N
5MT3251	685550	4146850	M2CE	S	800	HT	P2	N	N	N	N	Y	0	0	0	8-26	0	Y	N
5MT3252	685640	4146930	M2C	S	800	HT	P2	N	N	N	N	Y	0	0	0	8-27	0	Y	N
5MT3253	685660	4147070	R7D	S	900	APF	P3	Y	N	N	N	N	3	0	0	8-28	0	?	N
5MT3254	685690	4147050	R7D	S	900	APLC	P2	N	N	N	N	N	0	0	0	8-29	0	N	N
5MT3255A	685550	4147000	ROC	S	650	HPS	B3	N	N	N	N	N	10	0	1	8-30	0	Y	N
5MT3255B	685550	4147000	ROC	S	650	APF	P3	N	N	N	N	N	9	0	0	8-30	0	Y	N
5MT3256	685000	4145850	ROC	T	825	A	HA	N	N	N	N	N	0	0	0	8-31	0	?	N
5MT3257	685480	4146580	M2CE	S	600	ASFG	ANL	N	N	N	N	Y	0	0	0	8-32	0	Y	N
5MT3258	685450	4146470	M2CE	S	610	APF,AAD	P3	N	N	N	N	N	8	0	0	8-33	0	Y	N
5MT3259	685080	4145480	M2CE	S	650	ASFG	AN	N	N	N	N	Y	0	0	0	8-35	0	?	N
5MT3260	685460	4145920	M2C	S	800	HTF	P2	N	N	N	N	N	2	0	0	8-36	0	Y	N
5MT3261	685640	4145830	M2C	T	690	APLC	ARM	N	N	N	N	N	0	0	0	8-37	0	N	N
5MT3262	685650	4146420	M2C	T	575	HPS	P2E	N	N	N	N	N	10	0	1	8-38	0	Y	N
5MT3263	685680	4146360	M2C	T	525	A	ANE	N	N	N	N	N	2	0	0	8-39	0	?	N
5MT3264	685720	4146300	M2C	T	500	HT	P2	N	N	N	N	N	8	0	0	8-40	0	Y	N
5MT3265	685590	4146400	M2C	S	625	APF	P2	N	N	N	N	N	3	0	0	8-41	0	?	N
5MT3266	685500	4146530	M2C	S	650	HTF	P3	N	N	N	N	N	3	0	0	8-42	0	Y	N
5MT3267	685570	4146240	M2C	S	625	HTF	P3	N	N	N	N	N	8	0	0	8-43	0	Y	N
5MT3268	685510	4146300	M2C	S	700	APF	P2	N	N	N	N	N	2	0	0	8-44	0	?	N
5MT3269	685640	4146150	M2C	S	550	APFR	ANL	N	N	N	N	N	1	0	0	8-45	0	?	N

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT3270	685740	4146190	M2C	S	425	APF	ARM	N	N	N	N	N	2	0	0	8-46	0	?	N
5MT3271	685420	4145890	M2CE	S	850	ASFG	ANL	N	N	N	N	Y	0	0	0	8-47	0	?	N
5MT3272	685550	4145910	M2C	S	700	A	P3	N	N	N	N	N	4	0	0	8-48	0	?	N
5MT3273	683870	4145840	R4C	T	275	APF	P3	N	N	N	N	N	4	0	0	9-2	0	Y	N
5MT3274	684070	4145930	ROC	B	500	HT	P2	N	N	N	N	N	0	0	0	9-3	0	?	N
5MT3275	684180	4145860	ROC	T	500	APF	ANL	N	N	N	N	N	10	0	0	9-4	0	Y	N
5MT3276	684180	4146200	M2DD	T	700	HTF	P3	N	N	N	N	N	1	0	0	9-5	0	?	N
5MT3277	684300	4146400	M2DD	T	700	APLC	PR	N	Y	N	N	N	0	0	0	9-6	0	N	N
5MT3278	684280	4145950	ROC	T	700	APF	PR	N	Y	N	N	N	2	0	0	9-7	0	?	N
5MT3279	684280	4146050	ROC	T	700	HTF	ANL	N	Y	N	N	N	14	0	0	9-8	0	Y	N
5MT3280	684300	4146280	M2DD	T	700	APLC, APF	ANL	N	N	N	N	N	3	0	0	9-9	0	?	N
5MT3281	684290	4146210	ROC	B	700	APLC	ANL	N	Y	N	N	N	0	0	0	9-10	0	?	N
5MT3282	684380	4145800	ROC	T	700	HPS	B3	N	Y	N	N	N	5	0	1	9-11	0	Y	N
5MT3283	684450	4145940	ROC	S	800	HPM	B3	N	Y	N	N	N	2	0	2	9-12	0	Y	N
5MT3284	684570	4145900	ROC	S	800	APF	P2	N	Y	N	N	N	5	0	0	9-13	0	Y	N
5MT3285	684770	4146080	ROC	T	600	HTF	ANL	N	Y	N	N	N	4	0	0	9-15	0	Y	N
5MT3286	684640	4146150	ROC	T	500	HT	P2	N	Y	N	N	N	24	0	0	9-16	0	?	N
5MT3287A	684820	4146280	ROC	T	300	HPS	P2E	N	Y	N	N	N	6	1	2	9-17	0	Y	N
5MT3287B	684820	4146280	ROC	T	300	HT	P3L	N	Y	N	N	N	6	0	0	9-17	0	Y	N
5MT3288	684860	4146380	ROC	S	280	HPS	P2E	N	Y	N	N	N	4	1	1	9-18	0	Y	N
5MT3289	684960	4146340	ROC	S	300	HT	P2	N	Y	N	N	N	2	0	0	9-19	0	Y	N
5MT3290	684970	4146470	ROC	S	200	APF	ANL	N	Y	N	N	N	2	0	0	9-20	0	?	N
5MT3291	683700	4145830	M2DD	T	75	HPS	P3L	N	Y	N	N	N	3	1	1	9-22	0	Y	N
5MT3292	683470	4145820	M2DD	T	80	HTF	P3	N	N	N	N	N	9	0	0	9-23	0	?	N
5MT3293	683800	4146100	M2DD	S	425	APLC	AN	N	N	N	N	N	0	0	0	9-24	0	Y	N
5MT3295	684440	4146430	M2DD	S	425	APF	ANL	N	N	N	N	N	6	0	0	9-26	0	?	N
5MT3296A	684550	4146350	ROC	S	450	AAD,APF	P2	N	N	N	N	N	4	0	0	9-27	0	?	N
5MT3296B	684550	4146350	ROC	S	450	HTF	P2	N	N	N	N	N	4	0	0	9-27	0	?	N
5MT3297	684680	4146360	ROC	S	340	APF	P3	N	Y	N	N	N	2	0	0	9-28	0	?	N
5MT3298	684750	4146700	M2DD	B	200	APF,AAD	P3	N	N	N	N	N	1	0	0	9-30	0	?	N
5MT3299	684780	4146530	M2DD	B	100	APF	ANL	N	N	N	N	N	0	0	0	9-31	0	?	N
5MT3300	684910	4146510	ROC	B	140	APF	P3	N	N	N	N	N	4	0	0	9-32	0	?	N
5MT3301	685110	4146330	ROC	S	350	APF	P3	N	N	N	N	N	3	0	0	9-35	0	?	N
5MT3302	685190	4146460	ROC	T	350	APF	ANL	Y	N	N	N	N	1	0	0	9-36	0	?	N
5MT3303A	685020	4146870	M2DD	T	175	HPS	P2L	Y	Y	N	N	N	0	0	1	10-2	0	Y	N
5MT3303B	685020	4146870	M2DD	T	175	HPM	P3E	Y	Y	N	N	N	2	1	2	10-2	0	Y	N
5MT3303C	685020	4146870	M2DD	T	175	HPM	P3L	Y	Y	N	N	N	3	1	2	10-2	0	Y	N
5MT3304	685040	4147040	M2DD	T	400	HPS,ACC	P2L	N	Y	N	N	N	1	0	1	10-4	0	Y	N
5MT3305	685170	4146720	M2DD	S	250	A	PR	N	Y	N	N	N	1	0	0	10-5	0	?	N
5MT3306	685080	4147070	M2DD	S	450	APF	PR	N	Y	N	N	N	4	0	0	10-6	0	?	N
5MT3307	685350	4147140	ROC	T	600	APF,APV	P1	N	Y	N	N	N	12	0	0	10-7	0	Y	N
5MT3308	685410	4147690	M2DD	S	300	HTF	P3	N	Y	N	N	N	0	0	0	10-9	0	?	N
5MT3309	685250	4147490	M2DD	T	600	APF	AN	N	Y	N	N	N	1	0	0	10-10	0	?	N
5MT3310	685290	4147450	M2DD	A	550	APLC,APF	AN	N	Y	N	N	N	8	0	0	10-11	0	?	N
5MT3311	684990	4148420	M2DD	S	600	HT	P2E	N	Y	N	N	N	2	0	0	11-2	0	Y	N
5MT3312	685050	4148250	ROB	S	450	A	B3	N	Y	N	N	N	4	0	0	11-3	0	Y	N
5MT3313	684920	4148200	ROD	T	550	HPS	B3	N	Y	N	N	N	12	0	1	11-4	0	Y	N
5MT3314	684820	4148130	ROD	T	600	HPM	P2E	Y	Y	N	N	N	0	0	2	11-5	0	Y	N
5MT3315	684730	4148100	ROD	T	700	APF	AN	N	Y	N	N	N	2	0	0	11-6	0	?	N
5MT3316	684890	4147820	M2DD	S,B	450	APLC	PR	N	Y	N	N	N	0	0	0	11-7	0	?	N
5MT3317	684780	4147970	ROD	T	600	A	P3E	N	Y	N	N	N	1	0	0	11-8	0	?	N
5MT3318	684680	4148000	ROD	T	700	HPS	P2L	N	Y	N	N	N	6	0	1	11-9	0	Y	N
5MT3319	684680	4147890	ROD	T	600	HPS	B3	N	Y	N	N	N	2	1	1	11-10	0	Y	Y
5MT3320	684500	4147780	ROD	T	950	HPS	B3	Y	Y	N	N	N	7	0	1	11-11	0	Y	N

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT3321A	684120	4147900	ROD	T,S	1,100	APF	B3	N	Y	N	N	N	2	0	0	11-13	0	?	N
5MT3321B	684120	4147900	ROD	T,S	1,100	APF	P2	N	Y	N	N	N	2	0	0	11-13	0	?	N
5MT3322A	683860	4147870	M2DD	T	1,400	HPS	P2L	Y	Y	N	N	N	3	1	1	11-14	0	Y	N
5MT3322B	683860	4147870	M2DD	T	1,400	HPS	P3E	Y	Y	N	N	N	3	1	1	11-14	0	Y	N
5MT3322C	683860	4147870	M2DD	T	1,400	HPS	P3L	Y	Y	N	N	N	3	1	1	11-14	0	Y	N
5MT3323	683860	4147870	M2DD	S	1,200	HPS?	B3	N	Y	N	N	N	10	0	1	11-15	0	Y	N
5MT3324	684170	4148150	M2DD	S	1,200	HPS	P2L	N	Y	N	N	N	10	0	1	11-16	0	Y	N
5MT3325	684120	4148280	M2DD	S	1,200	ACR	P3L	N	N	N	N	N	0	0	0	11-17	0	Y	N
5MT3326	684540	4148230	M2DD	B,S	900	APF	ANE	N	Y	N	N	N	6	0	0	11-18	0	?	N
5MT3327	684520	4148070	ROD	T	850	APF	ANE	N	Y	N	N	N	1	0	0	11-19	0	?	N
5MT3328	684580	4148030	ROD	T	800	APF	ANE	N	Y	N	N	N	1	0	0	11-20	0	?	N
5MT3329	685530	4149050	R7D	S	1,075	APFR	ANL	N	Y	N	N	N	1	0	0	14-1	0	?	N
5MT3330	685670	4149150	R7D	S	1,100	APF	PR	N	Y	N	N	N	1	0	0	14-2	0	?	N
5MT3331	685570	4149180	M2DD	S	200	APF	PR	N	Y	N	N	N	1	0	0	14-3	0	Y	N
5MT3331	685570	4149180	M2DD	S	200	APF	PR	N	Y	N	N	N	1	0	0	14-3	0	Y	N
5MT3332	685640	4149250	M2DD	S	1,050	APF	PR	N	Y	N	N	N	3	0	0	14-4	0	?	N
5MT3333	685500	4149140	M2CE	S	950	APLC	PR	N	Y	N	N	N	0	0	0	14-5	0	?	N
5MT3334	685660	4149310	M2DD	S	1,050	APFR,APLC	PR	N	Y	N	N	N	1	0	0	14-7	0	?	N
5MT3335	685970	4149150	M2DD	S	700	APF,APLC	ANL	N	Y	N	N	N	1	0	0	14-8	0	?	N
5MT3980	687330	4150960	ROC	T,S	330	HPS	B3	N	Y	N	N	N	3	0	1	PI-9	0	Y	N
5MT3981	687530	4150700	M2DD	S	600	A	ANL	N	Y	N	N	N	1	0	0	HF#1	0	?	N
5MT3982	687555	4150820	M2DD	S	500	APLC	PR	N	Y	N	N	N	0	0	0	HF#2	0	N	T
5MT4055	684380	4146370	M2DD	S	580	HTF	ANL	N	N	N	N	N	7	0	0	9-25	0	?	N
5MT4060	684910	4146790	M2DD	S	150	APF	ANL	N	Y	N	N	N	3	0	0	10-1	0	?	N
5MT4386	684970	4146560	M2DD	S	100	HPS	P3L	N	N	N	N	N	2	0	1	9-21	0	Y	N
5MT4991	685280	4148560	ROB	T	590	HTF	P2	N	Y	N	N	N	6	0	0	84-14-2	0	Y	N
5MT4992	685370	4148510	ROB	T	500	HTF	P2E	N	Y	N	N	N	6	0	0	84-14-3	0	Y	N
5MT4993A	685410	4148420	ROB	T	400	HPM	P2L	Y	Y	N	N	N	0	0	2	SMS2-7-3	0	Y	N
5MT4993B	685410	4148420	ROB	T	400	HPM	P3E	Y	Y	N	N	N	0	2	2	SMS2-7-3	0	Y	N
5MT4993C	685410	4148420	ROB	T	400	HPM	P3L	Y	Y	N	N	N	0	2	2	SMS2-7-3	0	Y	N
5MT4993D	685410	4148420	ROB	T	400	HPM	P2E	Y	Y	N	N	N	0	0	2	SMS2-7-3	0	Y	N
5MT4994	685420	4148290	M2CE	S	300	ASFG	P2	N	N	N	N	Y	0	0	0	SMS2-7-4	0	?	N
5MT5001	686860	4149700	M2DD	T	250	HPM	P3E	Y	Y	N	N	N	0	1	2	KA	0	Y	N
5MT5007	684450	4147320	M2DD	S	700	APLC	ANL	N	Y	N	N	N	0	0	0	SMS3-41-1	0	?	N
5MT5008	684360	4147460	M2DD	S	950	APLC,APFK,APF	ANL	N	Y	N	N	N	8	0	0	SMS3-41-2	0	Y	N
5MT5009	684260	4147460	ROD	T	1,000	APF,APLC	ANL	N	Y	N	N	N	1	0	0	SMS3-41-3	0	?	N
5MT5011A	684600	4147800	ROD	T	650	HPS	B3	N	Y	N	N	N	10	1	1	SMS3-41-5	0	?	Y
5MT5011B	684600	4147800	ROD	T	650	HPS	P2E	N	Y	N	N	N	10	1	1	SMS3-41-5	0	?	Y
5MT5018	684180	4147760	ROD	T	1,100	HPS	B3	N	Y	N	N	N	6	1	1	SMS3-41-6	0	?	Y
5MT5019	683920	4147750	M2DD	T	1,400	HPS	B3	N	Y	N	N	N	8	0	1	SMS3-41-7	0	Y	N
5MT5823A	687250	4149510	ROB	T	475	HPS	P3E	Y	Y	N	N	N	0	1	1	-	0	Y	N
5MT5823B	687250	4149510	ROB	T	475	HPS	P3L	Y	Y	N	N	N	0	1	1	-	0	Y	N
5MT5826	687100	4149220	ROC	T	400	HPM	P2E	Y	Y	N	N	N	0	1	2	EEA	0	Y	N
5MT6337	684220	4142900	M2DD	T	950	HT	ANE	N	Y	N	N	N	0	0	0	EEA	0	Y	N
5MT6338	684300	4142990	M2DD	T	900	A	AN	N	Y	N	N	N	0	0	0	EEA	0	N	N
5MT6339	684550	4143220	R7D	T	700	APF,APLC	AN	N	Y	N	N	N	2	0	0	EEA	0	Y	N
5MT6355	687390	4151410	ROC	T	300	HT	B3	N	Y	N	N	N	4	0	0		0	Y	N
5MT6739A	684600	4144040	R7D	T	250	HPS	B3	N	Y	N	N	N	1	0	1	EEA	0	Y	N
5MT6739B	684600	4144040	R7D	T	250	HPS	P2L	N	Y	N	N	N	1	0	1	EEA	0	Y	N
5MT6740	684600	4144320	ROC	T	500	HPS	P2E	N	Y	N	N	N	0	0	1	EEA	0	Y	N
5MT6741A	684500	4144500	ROC	T	600	HPS	B3	N	Y	N	N	N	8	0	1	EEA	0	Y	N
5MT6741B	684500	4144500	ROC	T	600	HTF	P2	N	Y	N	N	N	8	0	0	EEA	0	Y	N
5MT6742	684540	4144680	ROC	T	450	HPS	P2L	Y	Y	N	N	N	3	0	1	EEA	0	Y	N
5MT6743	684500	4144900	ROC	S	500	A	B3	N	Y	N	N	N	0	0	0	EEA	0	N	N

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT6744A	684720	4145660	R0C	T	900	HPS	P2E	Y	Y	N	N	N	0	0	1	EEA	0	Y	N
5MT6744B	684720	4145660	R0C	T	900	HPS	P2L	Y	Y	N	N	N	0	0	1	EEA	0	Y	N
5MT6745	685070	4146500	R0C	S	250	HTF	P2	N	Y	N	N	N	0	0	0	EEA	0	?	N
5MT6746A	685320	4146900	R0C	A	250	HPM	B3	N	Y	N	N	N	15	0	2	10-3	0	Y	N
5MT6746B	685320	4146900	R0C	A	250	HT	P2L	N	Y	N	N	N	15	0	0	10-3	0	Y	N
5MT6746C	685320	4146900	R0C	A	250	HT	P3E	N	Y	N	N	N	15	0	0	10-3	0	Y	N
5MT6752	686460	4148700	R0B	T	875	AAM	ANL	N	N	N	N	N	0	0	0	EEA	0	N	Y
5MT6753	686900	4149100	R0B	T	300	HTF	P2	N	N	N	N	N	0	0	0	EEA	0	?	N
5MT6754	687000	4149149	R0C	T	400	HPS	P2E	N	Y	N	N	N	0	0	1	EEA	0	?	N
5MT6768	684440	4142650	M2DD	S	1,400	ACR	ANL	N	N	Y	N	N	0	0	0	KA	0	Y	N
5MT6820	685500	4147570	M2DD	T	450	HTF	P2	N	Y	N	N	N	4	0	0	13-86	0	?	N
5MT6821	685700	4147810	R7D	S	225	A,AAD	ANL	N	Y	N	N	N	2	0	0	13-84	0	N	Y
5MT6822	685620	4147900	R7D	T	440	APF	AN	N	Y	N	N	N	1	0	0	13-85	0	?	N
5MT6823	685670	4147940	R7D	S	500	HTF	AN	N	Y	N	N	N	1	0	0	13-78	0	?	N
5MT6824	685670	4148020	R7D	S	250	APF,AAD	AN	N	Y	N	N	N	1	0	0	13-77	0	?	N
5MT6825	685820	4148270	R7D	B	300	AAD	P3	N	Y	N	N	N	1	0	0	13-76	0	?	N
5MT6827	686200	4148470	R0B	T	900	HPS	P2E	N	Y	N	N	N	0	0	1	13-90	0	Y	N
5MT6860	687230	4150350	R0B	S	800	HPS	B3	N	Y	N	N	N	5	0	1	EEA	0	Y	N
5MT6861	687270	4150640	R0C	S	550	HPS	P2E	N	Y	N	N	N	0	0	1	EEA	0	Y	N
5MT6930	687140	4149780	R0B	T	600	HTF	P2	N	Y	N	N	N	0	0	0	EEA	0	Y	N
5MT6958	686940	4149560	R0B	S	350	HPM	P2E	N	Y	N	N	N	0	0	2	-	0	Y	N
5MT6967A	687500	4151010	M2DD	T	350	HPM	P2L	Y	Y	N	N	N	0	0	6	WGS33	0	Y	N
5MT6967B	687500	4151010	M2DD	T	350	HPM	P3E	Y	Y	N	N	N	0	3	6	WGS33	3	Y	N
5MT6967C	687500	4151010	M2DD	T	350	HPM	P3L	Y	Y	N	N	N	0	3	6	WGS33	3	Y	N
5MT7283	685880	4147520	R0C	T	700	HPS	P2E	Y	Y	N	N	N	3	0	1	13-2	0	Y	N
5MT7284A	686430	4147850	M2C	T	900	HPS	P3E	Y	N	N	N	N	1	0	1	13-3	1	Y	N
5MT7284B	686430	4147850	M2C	T	900	HPS	P3L	Y	N	N	N	N	1	0	1	13-3	1	Y	N
5MT7285	686470	4148970	M2DD	B	475	APF,APLC	PR	N	Y	N	N	N	1	0	0	13-6	0	N	N
5MT7286	686590	4148920	R0B	S	500	APF	PR	N	Y	N	N	N	1	0	0	13-7	0	N	N
5MT7287	686700	4148140	R4D	T	490	APF	ANL	N	N	N	N	N	3	0	0	13-10	0	Y	N
5MT7288	686780	4147940	M2C	S	500	HT	ANL	Y	N	N	N	N	0	0	0	13-12	0	Y	N
5MT7289A	686860	4147850	R4D	A	550	ACH	HNA	N	N	N	N	N	1	0	0	13-13	0	Y	N
5MT7289B	686860	4147850	R4D	A	550	APF	PR	N	N	N	N	N	3	0	0	13-13	0	Y	N
5MT7290	686920	4148320	M2C	S	350	APF	P3L	N	N	N	N	N	1	0	0	13-16	0	?	N
5MT7291	686840	4148310	M2C	S	300	APF	PR	N	N	N	N	N	1	0	0	13-17	0	?	N
5MT7292A	686910	4148090	M2C	S	250	HPS	P2E	Y	N	N	N	N	0	0	1	13-18	0	Y	N
5MT7292B	686910	4148090	M2C	S	250	HPS	P2L	Y	N	N	N	N	0	0	1	13-18	0	Y	N
5MT7292C	686910	4148090	M2C	S	250	HPS	P3E	Y	N	N	N	N	0	0	1	13-18	0	Y	N
5MT7292D	686910	4148090	M2C	S	250	HPS	P3L	Y	N	N	N	N	0	0	1	13-18	0	Y	N
5MT7293A	687100	4148090	M2DD	S	275	HT	P2	Y	N	N	N	N	3	0	0	13-19	0	Y	N
5MT7293B	687100	4148090	M2DD	S	275	HT	P3	Y	N	N	N	N	2	0	0	13-19	0	Y	N
5MT7294	687040	4148160	M2DD	B	120	APF	AN	N	N	N	N	N	1	0	0	13-20	0	Y	N
5MT7295	686000	4147630	R0C	T	675	HPS	P2E	N	Y	N	N	N	2	0	1	13-21	0	Y	N
5MT7296A	686040	4147650	R0C	T	675	HPM	P2E	N	Y	N	N	N	0	1	2	13-22	0	Y	N
5MT7296B	686040	4147650	R0C	T	675	HTF	P3E	N	Y	N	N	N	0	0	0	13-22	0	Y	N
5MT7297	685950	4147630	R0C	T	650	APF	PR	N	N	N	N	N	1	0	0	13-23	0	?	N
5MT7298	685790	4147920	R7D	B	330	APF	PR	N	N	N	N	N	1	0	0	13-24	0	Y	N
5MT7299	685790	4147920	R7D	S	350	APLC,A	ANE	N	N	N	N	N	1	0	0	13-25	0	Y	N
5MT7300	686800	4148950	R0C	S	350	APF	P2E	N	N	N	N	N	2	0	0	13-26	0	Y	N
5MT7301	687140	4148600	R7D	S	300	APF	ANE	N	Y	N	N	N	1	0	0	13-28	0	?	N
5MT7302	686970	4148730	R0C	T	450	APF	ANL	N	Y	N	N	N	1	0	0	13-29	0	N	N
5MT7303	686760	4148590	R0B	B	500	APF	AN	N	Y	N	N	N	5	0	0	13-30	0	N	N
5MT7304	686400	4148740	R0B	S	600	APF	ANL	N	N	N	N	N	2	0	0	13-31	0	N	N
5MT7305	686400	4148750	R0B	B	800	APF	ANL	N	N	N	N	N	4	0	0	13-32	0	N	N

SITE NUMBER	UTM ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT7306	686210 4147490	R7D	B	900	ASWR	ANL	N	Y	N	N	N	0	0	0	13-34	0	Y	N
5MT7307	686220 4147580	R7D	T	900	APFR	PR	N	Y	N	N	N	1	0	0	13-35	0	?	N
5MT7308	686210 4147650	R7D	S	810	APF	ANE	N	Y	N	N	N	1	0	0	13-36	0	N	N
5MT7309A	686210 4148050	ROC	T	850	HPS	P1L	N	Y	N	N	N	2	0	1	13-37	0	Y	N
5MT7309B	686210 4148050	ROC	T	850	HPS	P2E	N	Y	N	N	N	2	1	1	13-37	0	Y	N
5MT7310	686210 4147990	ROC	T	725	APF	P2	N	Y	N	N	N	2	0	0	13-38	0	?	N
5MT7311	685890 4148060	R7D	B	400	APF	P2	N	N	N	N	N	1	0	0	13-39	0	N	N
5MT7312	686380 4148440	R7D	T	725	A	ANL	N	Y	N	N	N	0	0	0	13-40	0	N	N
5MT7313	686380 4148170	R7D	B	800	HPS	P3E	Y	Y	N	N	N	4	0	1	13-41	0	Y	N
5MT7314	686450 4148200	M2C	S	750	A	PR	N	Y	N	N	N	0	0	0	13-42	0	N	N
5MT7315	687000 4148350	M2DD	S	200	APF	PR	N	N	N	N	N	4	0	0	13-43	0	?	N
5MT7316	686610 4148440	R7D	S	500	APF	P2	N	Y	N	N	N	4	0	0	13-44	0	?	N
5MT7317	685700 4147700	ROC	T	500	HPS	P1E	N	Y	N	N	N	3	1	1	13-45	0	Y	Y
5MT7318	686830 4148390	M2C	S	500	A	ANL	N	N	N	N	N	0	0	0	13-46	0	N	N
5MT7319	686850 4148350	M2C	S	300	APF	ANL	N	N	N	N	N	1	0	0	13-47	0	?	N
5MT7320	687130 4147920	M2DD	S	375	APF,APLC	PR	N	N	N	N	N	1	0	0	13-48	0	?	N
5MT7321	686970 4147860	M2C	T	550	A	PR	N	N	N	N	N	0	0	0	13-49	0	?	N
5MT7322	687120 4148330	ROC	S	130	APF	PR	N	N	N	N	N	2	0	0	13-51	0	?	N
5MT7323A	686590 4148540	ROB	T	550	HPS	B3	Y	N	N	N	N	0	1	1	13-52	0	?	Y
5MT7323B	686590 4148540	ROB	T	550	HPS	P2L	Y	N	N	N	N	0	1	1	13-52	0	?	Y
5MT7324	686940 4148530	M2C	S	300	APF	PR	N	Y	N	N	N	1	0	0	13-53	0	?	N
5MT7325	686960 4148480	M2C	S	250	APF	ANL	N	N	N	N	N	1	0	0	13-54	0	?	N
5MT7326	687110 4148480	ROC	T	150	APF	PR	N	N	N	N	N	1	0	0	13-55	0	N	N
5MT7327	687130 4148400	ROC	S	100	APF,APLC	PR	N	N	N	N	N	1	0	0	13-56	0	?	N
5MT7328	686860 4148540	M2C	S	300	APF	PR	N	Y	N	N	N	3	0	0	13-57	0	?	N
5MT7329A	687120 4147500	M2DD	A	750	APLC,APF,APV	ARL-B2	N	N	N	N	N	7	0	0	13-58	0	Y	N
5MT7329B	687120 4147500	M2DD	A	750	APLC,APF,APV	AN	N	N	N	N	N	7	0	0	13-58	0	Y	N
5MT7330	686720 4147600	R4D	S	800	HT	P2E	N	N	N	N	N	0	0	0	13-59	0	Y	N
5MT7331	687090 4147710	M2DD	S	600	HT	P2	N	N	N	N	N	0	0	0	13-60	0	?	N
5MT7332	686860 4148180	R4D	S	375	APFR	PR	N	N	N	N	N	1	0	0	13-61	0	?	N
5MT7333	686900 4147440	M2C	S	925	APF,APLC	PR	N	N	N	N	N	1	0	0	13-62	0	?	N
5MT7334	686950 4147600	M2C	B	750	APF	PR	N	N	N	N	N	1	0	0	13-63	0	?	N
5MT7335	686920 4147500	M2C	S	850	AAD	ANL?	N	N	N	N	N	0	0	0	13-64	0	?	N
5MT7336	687160 4147700	M2DD	S	640	HT	P2	N	N	N	N	Y	0	0	0	13-65	0	?	N
5MT7337A	686920 4147760	M2C	S	550	HPM	P2L	Y	N	N	N	Y	0	2	4	13-66	0	Y	N
5MT7337B	686920 4147760	M2C	S	550	HPM	P3E	Y	N	N	N	Y	0	2	4	13-66	1	Y	N
5MT7337C	686920 4147760	M2C	S	550	HPM	P3L	Y	N	N	N	Y	0	2	4	13-66	1	Y	N
5MT7338	686900 4147705	M2C	S	650	HT	P3	N	N	N	N	N	0	0	0	13-67	0	?	N
5MT7339	686840 4147710	M2C	S	700	APF	P3	N	N	N	N	N	1	0	0	13-68	0	?	N
5MT7340	686800 4147245	M2C	B	600	APF	ANE	N	N	N	N	N	1	0	0	13-69	0	?	N
5MT7341	686740 4147750	R4D	S	725	HTF	P3	N	N	N	N	N	1	0	0	13-71	0	?	N
5MT7342	685500 4148390	M2DD	T	400	APF	ANL	N	N	N	N	N	1	0	0	13-72	0	?	N
5MT7343	685660 4148070	M2DD	S	200	AAD	ANL	N	N	N	N	N	0	0	0	13-74	0	?	N
5MT7344	685640 4147990	M2DD	S	175	A	PR	N	N	N	N	Y	0	0	0	13-75	0	?	N
5MT7345A	685840 4148870	ROB	T	1,000	HPS	P3E	Y	N	N	N	N	0	1	1	13-79	1	Y	N
5MT7345B	685840 4148870	ROB	T	1,000	HPS	P3L	Y	N	N	N	N	0	1	1	13-79	1	Y	N
5MT7346	685520 4148410	ROB	S	500	APF	P2	N	Y	N	N	N	1	0	0	13-80	0	?	N
5MT7347	685820 4148380	ROB	S	600	HPS	B3	N	Y	N	N	N	7	0	1	13-81	0	Y	N
5MT7348	685510 4148400	M2DD	S	400	APF	PR	N	Y	N	N	N	1	0	0	13-82	0	?	N
5MT7349	685940 4148740	ROB	S	950	APF	AN	N	Y	N	N	N	1	0	0	13-87	0	N	N
5MT7350	686200 4148860	ROB	T	850	APF	AN	N	Y	N	N	N	1	0	0	13-88	0	?	N
5MT7351	686170 4148690	ROB	S	900	HPS	B3	N	Y	N	N	N	0	0	1	13-89	0	?	N
5MT7352	686100 4148940	M2CE	S	800	HT	P3	N	N	N	N	Y	0	0	0	13-93	0	?	N
5MT7353	686180 4148840	M2CE	B	800	AAD	ANL	N	N	N	N	N	0	0	0	13-94	0	?	N

SITE NUMBER	UTM ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT7354A	685460 4148090	M2CE	S	50	ASFG	B3	Y	N	Y	N	Y	0	0	0	13-97	0	Y	Y
5MT7354B	685460 4148090	M2CE	S	50	ASFG	P1	Y	N	Y	N	Y	0	0	0	13-97	0	Y	Y
5MT7354C	685460 4148090	M2CE	S	50	HPS	P2L	Y	N	Y	N	N	0	0	1	13-97	0	Y	Y
5MT7354D	685460 4148090	M2CE	S	50	HPM	P3E	Y	N	Y	N	Y	0	2	2	13-97	1	Y	Y
5MT7354E	685460 4148090	M2CE	S	50	HPM	P3L	Y	N	Y	N	Y	0	2	2	13-97	1	Y	Y
5MT7355	685660 4148110	M2DD	S	150	HT	ANL	N	N	N	N	Y	0	0	0	13-98	0	?	N
5MT7356A	685670 4147120	R7D	T	700	HPS	P3E	Y	Y	N	N	N	0	1	1	24-1	0	Y	N
5MT7356B	685670 4147120	R7D	T	700	HPS	P3L	Y	Y	N	N	N	0	1	1	24-1	0	Y	N
5MT7357	686780 4147170	M2C	S	900	APF	ANL	N	N	N	N	N	1	0	0	24-2	0	?	N
5MT7358A	686040 4147280	M2C	T	800	HPS	B3	N	Y	N	N	N	0	1	1	24-4	0	Y	N
5MT7358B	686040 4147280	M2C	T	800	A	P2	N	Y	N	N	N	0	0	0	24-4	0	Y	N
5MT7359	686370 4147240	R4D	S	1,000	HT	ANL	N	N	N	N	N	1	0	0	24-8	0	?	N
5MT7360A	686260 4147320	M2C	S	1,000	HPS	P1L	Y	N	N	N	Y	0	1	1	24-9	0	Y	N
5MT7360B	686260 4147320	M2C	S	1,000	ASWR	ANL	Y	N	N	N	N	0	0	0	24-9	0	Y	N
5MT7360C	686260 4147320	M2C	S	1,000	HPS	P2E	Y	N	N	N	Y	0	0	1	24-9	0	Y	N
5MT7360D	686260 4147320	M2C	S	1,000	HPS	P2L	Y	N	N	N	Y	0	0	1	24-9	0	Y	N
5MT7360E	686260 4147320	M2C	S	1,000	HPS	P3E	Y	N	Y	N	Y	0	1	1	24-9	0	Y	N
5MT7360F	686260 4147320	M2C	S	1,000	HPS	P3L	Y	N	Y	N	Y	0	1	1	24-9	0	Y	N
5MT7361	686270 4147370	M2C	T,S	1,200	ASWR,ACC	ANL	N	N	N	N	N	2	0	0	24-10	0	Y	N
5MT7362	687000 4147380	M2DD	S	1,000	APFR	PR	N	N	N	N	N	1	0	0	24-12	0	N	N
5MT7363	686650 4147210	R4D	S	1,200	HPS	B3	N	N	N	N	N	2	0	1	24-14	0	Y	N
5MT7364	686720 4147280	R4D	S	1,200	APF	PR	N	N	N	N	N	1	0	0	24-15	0	N	N
5MT7365	686820 4147290	M2DD	S	1,100	A	PR	N	N	N	N	Y	0	0	0	24-18	0	?	N
5MT7366	686800 4147260	M2DD	S	1,100	HT	P3	N	N	N	N	Y	0	0	0	24-19	0	?	N
5MT7367	687070 4147360	M2C	S	950	HT	P3	N	N	N	N	Y	0	0	0	24-20	0	?	N
5MT7368	686960 4147380	M2DD	S	900	APLC,APF,ASWR	ANL	N	N	N	N	N	4	0	0	24-21	0	Y	N
5MT7369	686880 4147400	M2C	S	1,000	HT,APF	P2	N	N	N	N	Y	3	0	0	24-22	0	?	N
5MT7370A	685510 4147190	ROC	T	500	HPS	P1L	Y	Y	N	N	N	0	0	1	24-23	0	Y	N
5MT7370B	685510 4147190	ROC	T	500	HPM	P2E	Y	Y	N	N	N	0	2	4	24-23	1	Y	N
5MT7370C	685510 4147190	ROC	T	500	HPM	P2L	Y	Y	N	N	N	0	2	4	24-23	1	Y	N
5MT7371	683400 4145800	M2C	S	400	HPS	P3L	Y	N	N	N	Y	0	1	1	22-1	0	Y	N
5MT7372A	686900 4147240	M2CE	S	1,175	HPM	P3E	Y	N	N	N	Y	0	2	4	24-24	0	Y	N
5MT7372B	686900 4147240	M2CE	S	1,175	HPM	P3L	Y	N	N	N	Y	0	2	4	24-24	0	Y	N
5MT7373	683690 4145540	M2DD	B	175	ASWR	ANL	N	N	N	N	N	0	0	0	27-3	0	?	N
5MT7374	682580 4145590	M2DD	T	1,025	APF	ANL	N	N	N	N	N	1	0	0	27-4	0	?	N
5MT7375	682900 4145480	M2C	B	750	APFR	ANL	N	N	N	N	N	2	0	0	27-5	0	?	N
5MT7376	683570 4145370	M2DD	B	325	APLC,APF	PR	N	N	N	N	N	1	0	0	27-7	0	?	N
5MT7377	683400 4145520	M2C	B	275	APF	ANL	N	N	N	N	N	3	0	0	27-8	0	Y	N
5MT7378	683320 4145510	M2C	S	400	APF	P2	N	N	N	N	N	1	0	0	27-10	0	?	N
5MT7379	682420 4145090	M2C	A	1,400	APF	ANL	N	N	N	N	N	4	0	0	27-12	0	Y	N
5MT7380	682500 4145140	M2CE	S	1,260	A	P3	N	N	N	N	Y	0	0	0	27-13	0	?	N
5MT7381	683620 4145310	M2DD	T	400	APF	PR	N	N	N	N	N	1	0	0	27-14	0	?	N
5MT7382	683340 4145430	M2CE	S	375	A	P2	N	N	N	N	Y	0	0	0	27-15	0	?	N
5MT7383	682810 4145070	M2C	T	1,030	A	ANL	N	N	N	N	N	0	0	0	27-16	0	?	N
5MT7384	683700 4145600	M2DD	B	150	A	ANL	N	N	N	N	N	1	0	0	27-17	0	?	N
5MT7385	683680 4145480	M2DD	S	250	HPS	B3	N	Y	N	N	N	0	0	1	27-18	0	Y	N
5MT7386	683710 4145500	M2DD	T	250	HPS	B3	N	N	N	N	N	1	0	1	27-19	0	Y	N
5MT7387	683690 4145520	M2DD	B	200	AAD, ACC?	ANL	N	N	N	N	N	2	0	0	27-20	0	Y	N
5MT7388	683670 4145730	M2DD	A	180	HTF	AN	N	N	N	N	N	4	0	0	27-21	0	?	N
5MT7389	683470 4145720	M2DD	A	150	APF	PR	N	N	N	N	N	1	0	0	27-22	0	?	N
5MT7390	683670 4145330	M2DD	B	375	APFR	PR	N	Y	N	N	N	1	0	0	27-23	0	?	N
5MT7391	683630 4144950	M2CE	S	300	HT	ANL	N	N	N	N	Y	0	0	0	27-25	0	?	N
5MT7392	682590 4145130	M2DD	T	1,200	APFK?	AN	N	N	N	N	N	1	0	0	27-27	0	?	N
5MT7393	683840 4144860	M2CE	S	100	HT	PR	N	N	N	N	Y	0	0	0	27-29	0	Y	N

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT7394	683770	4144850	M2CE	S	200	HT	ANL	N	N	N	N	Y	0	0	0	27-30	0	Y	N
5MT7395	683900	4144900	M2CE	B	0	HPM, AAD	P3L	N	N	Y	N	N	0	2	2	27-31	0	Y	N
5MT7396	683110	4145820	M2CE	S	900	APF	P3	N	N	N	N	N	2	0	0	27-32	0	?	N
5MT7397	683220	4144980	M2DD	T	700	HTF	P3	N	N	N	N	N	3	0	0	27-33	0	?	N
5MT7398	683750	4144220	M2CE	S	600	ASFG	P3	N	N	N	N	Y	0	0	0	27-34	0	Y	N
5MT7399	683200	4144160	M2DD	T,S	1,100	APF	ANL	N	Y	N	N	N	3	0	0	27-35	0	?	N
5MT7400A	683340	4144300	M2C	S	850	HPM	P2L	Y	N	N	Y	Y	0	0	4	27-36	0	Y	N
5MT7400B	683340	4144300	M2C	S	850	HPM	P3E	Y	N	Y	Y	Y	0	2	4	27-36	1	Y	N
5MT7400C	683340	4144300	M2C	S	850	HPM	P3L	Y	N	Y	Y	Y	0	2	4	27-36	1	Y	N
5MT7401	682340	4145440	M2CE	S	1,250	APLQ	PR	N	N	N	N	N	0	0	0	27-37	0	?	N
5MT7402	683340	4144340	M2CE	S	800	HT	P3	N	N	N	N	Y	0	0	0	27-38	0	?	N
5MT7403	682940	4145560	M2C	S	650	HT	ANL	N	N	N	N	Y	0	0	0	27-6	0	?	N
5MT7404	683250	4145550	M2C	B	350	APFK	ANL	N	N	N	N	N	1	0	0	27-9	0	?	N
5MT7405A	687270	4147400	M2C	S	900	HPM	P2L	Y	N	Y	N	Y	0	0	6	19-1	0	Y	N
5MT7405B	687270	4147400	M2C	S	900	HPM	P3E	Y	N	Y	N	Y	0	3	6	19-1	2	Y	N
5MT7405C	687270	4147400	M2C	S	900	HPM	P3L	Y	N	Y	N	Y	0	3	6	19-1	2	Y	N
5MT7406	686240	4147270	R4D	T	1,000	HPS	B3	N	N	N	N	N	3	0	1	24-6	0	Y	N
5MT7407	686810	4147290	R4D	S	1,300	HT?	P3	N	N	N	N	Y	0	0	0	24-17	0	Y	N
5MT7408	685480	4148860	M2DD	S	850	A,APF	AN	N	Y	N	N	N	3	0	0	13-91	0	Y	N
5MT7988	687310	4151900	ROD	S	700	A	P2?	N	Y	N	N	N	3	0	0	EEA	0	Y	N
5MT7990	687290	4151270	M2DD	S	100	APLC	B3	N	N	N	N	N	0	0	0	EEA	0	N	N
5MT8261	687450	4151640	M2DD	S	500	APLC	PR	N	Y	N	N	N	0	0	0	DCA	0	?	N
5MT8263	687580	4141160	M2DD	T	350	APF,APLC,APV	ANL	N	Y	N	N	N	1	0	0	DCA	0	Y	N
5MT8455	686380	4149660	M2DD	T	400	APLC,APF	PR	Y	Y	N	N	N	8	0	0	84-12-1	0	Y	N
5MT8456	686410	4149730	M2DD	B	425	APF	PR	N	Y	N	N	N	1	0	0	84-12-2	0	Y	N
5MT8457	686550	4149700	M2DD	B	325	APFK	P3E	N	Y	N	N	N	1	0	0	84-12-3	0	Y	N
5MT8458A	686300	4149600	M2DD	S	450	APLC,APFR	ARM	N	Y	N	N	N	1	0	0	84-12-4	0	Y	N
5MT8458B	686300	4149600	M2DD	S	450	APLC,APFR	ANE	N	Y	N	N	N	1	0	0	84-12-4	0	Y	N
5MT8459A	686670	4149630	M2DD	S	200	APLC	ARM?	N	Y	N	N	N	0	0	0	84-12-5	0	N	N
5MT8459B	686670	4149630	M2DD	S	200	APLC	AN	N	Y	N	N	N	0	0	0	84-12-5	0	N	N
5MT8460	686730	4149690	M2DD	A	225	APLC,APF	P2	N	Y	N	N	N	2	0	0	84-12-6	0	Y	N
5MT8461	686780	4149740	M2DD	S	400	APFK	P3	N	Y	N	N	N	1	0	0	84-12-7	0	Y	N
5MT8462	687150	4149940	ROB	S	700	HT	P1	N	Y	N	N	N	2	0	0	84-12-8	0	Y	N
5MT8463	687150	4149250	ROC	S	450	HPM	B3	N	Y	N	N	N	2	0	2	84-7-2	0	Y	N
5MT8464	687320	4150300	M2DD	S	350	APF,APLC	ANL	N	Y	N	N	N	4	0	0	84-7-3	0	Y	N
5MT8465	687340	4150380	M2DD	T	400	HPS	P1E	N	Y	N	N	N	1	0	1	84-7-4	0	Y	N
5MT8466	687400	4150470	M2DD	A	450	APF	P3	N	Y	N	N	N	4	0	0	84-7-5	0	Y	N
5MT8467	687060	4150260	M2DD	S	100	APF	B3	N	Y	N	N	N	7	0	0	84-7-6	0	Y	N
5MT8468	687020	4150320	M2DD	T	900	APF	PR	N	Y	N	N	N	2	0	0	84-12-A	0	Y	N
5MT8469	686910	4150340	M2DD	S	900	APLC,APF	P2E	N	Y	N	N	N	3	0	0	84-12-B	0	Y	N
5MT8471	686980	4150420	M2DD	T	800	APF	ANL	N	Y	N	N	N	3	0	0	84-12-D	0	Y	N
5MT8472	683600	4146850	M2DD	A	1,300	APLC	P2	N	Y	N	N	N	0	0	0	84-22-1	0	N	N
5MT8497	687180	4150720	M2DD	S	500	APF,APLC	ANL	N	Y	N	N	N	1	0	0	84-6-1	0	Y	N
5MT8498	687150	4150760	M2DD	S	410	APF,APLC	AN	N	Y	N	N	N	1	0	0	84-6-2	0	Y	N
5MT8499	685400	4148740	R7D	A	775	HTF	P2E	N	Y	N	N	N	5	0	0	84-14-1	0	Y	N
5MT8502	685230	4148540	ROB	T	700	A	AN	N	Y	N	N	N	1	0	0	84-14-5	0	N	N
5MT8503	685250	4148660	ROB	B	700	APF	AN	N	Y	N	N	N	2	0	0	84-14-6	0	?	N
5MT8504	685270	4148770	M2DD	S	800	APF	ANL	N	Y	N	N	N	1	0	0	84-14-7	0	N	N
5MT8505	685200	4148770	M2DD	S	830	APLC	ANL	N	Y	N	N	N	0	0	0	84-14-8	0	N	N
5MT8506	685160	4148730	M2DD	S	800	APF	ANL	N	Y	N	N	N	1	0	0	84-14-9	0	?	N
5MT8507	685160	4148800	M2DD	T	870	APF,APLC	PR	N	Y	N	N	N	1	0	0	84-14-10	0	Y	N
5MT8508	685200	4148690	M2DD	S	750	APF	AN	N	Y	N	N	N	2	0	0	84-14-11	0	?	N
5MT8509A	685160	4148530	ROD	T	600	HTF	P1	N	Y	N	N	N	8	0	0	84-14-12	0	Y	N
5MT8509B	685160	4148530	ROD	T	600	APF	ANL	N	Y	N	N	N	8	0	0	84-14-12	0	Y	N

SITE NUMBER	UTM	ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT8510	685160	4148420	ROD	T	525	HPM	B3	N	Y	N	N	N	17	0	2	84-14-13	0	Y	N
5MT8511	685120	4148300	ROD	T	450	HPM	B3	N	Y	Y	N	N	9	1	2	84-14-14	0	Y	Y
5MT8512	685220	4148290	M2DD	B	380	APF	PR	N	Y	N	N	N	1	0	0	84-14-15	0	N	N
5MT8513	685160	4148180	M2DD	S	350	APFK	AN	N	Y	N	N	N	6	0	0	84-14-16	0	Y	N
5MT8514	685100	4148120	M2DD	S	370	APLC,APF	AN	N	Y	N	N	N	3	0	0	84-14-17	0	?	N
5MT8515	685290	4148310	M2DD	S	360	APFR,APLC	AN	N	Y	N	N	N	2	0	0	84-14-18	0	N	N
5MT8523	687170	4151010	M2DD	B	200	APF	ANL	N	Y	N	N	N	1	0	0	84-6-3	0	N	N
5MT8524	687060	4151010	M2DD	S	230	APF	PR	N	Y	N	N	N	1	0	0	84-6-4	0	Y	N
5MT8525	687240	4151140	M2DD	T	100	APV,APLC	PR	N	Y	N	N	N	0	0	0	84-6-5	0	?	N
5MT8526	687200	4151400	M2DD	A	150	HTF	P2	N	Y	N	N	N	9	0	0	84-6-6	0	Y	N
5MT8527	687460	4151360	ROC	S	300	APFR,APLC	AN	N	Y	N	N	N	2	0	0	84-6-7	0	Y	N
5MT8528	687540	4151260	M2DD	A	380	APF,APLC	P2	N	Y	N	N	N	4	0	0	84-6-8	0	?	N
5MT8529	687260	4151520	ROD	T	300	HPS	B3	N	Y	N	N	N	3	0	1	84-6-10	0	Y	N
5MT8530	687445	4151190	M2DD	S	380	APLC	PR	N	Y	N	N	N	0	0	0	84-6-11	0	N	N
5MT8531	687500	4151920	M2DD	S	750	APF	P2	N	Y	N	N	N	1	0	0	84-6-12	0	?	N
5MT8532A	687700	4152100	M2DD	T	900	APF,APLC,APV	ARL-B2	Y	N	N	N	N	9	0	0	84-6-13	0	Y	N
5MT8532B	687700	4152100	M2DD	T	900	APF,APLC,APV	AN	Y	N	N	N	N	9	0	0	84-6-13	0	Y	N
5MT8533	687560	4152130	M2CE	S	910	APFR	PR	N	Y	N	N	N	1	0	0	84-6-14	0	Y	N
5MT8534A	687600	4151840	M2CE	S	730	HPM	P3E	Y	N	N	N	Y	0	1	2	84-6-15	0	Y	N
5MT8534B	687600	4151840	M2CE	S	730	HPM	P3L	Y	N	N	N	N	0	1	2	84-6-15	0	Y	N
5MT8535	687220	4149400	M2DD	T	825	HPS	P2E	N	Y	N	N	N	2	1	1	84-7-7	0	Y	N
[illegible]T8536	687150	4149620	ROB	T	650	AAM	P3	N	Y	N	N	N	1	0	0	84-7-8	0	N	N
[illegible]T8537	687200	4149730	ROB	T	550	HPS	P2E	N	Y	N	N	N	0	1	1	84-7-9	0	Y	N
[illegible]T8538	687340	4149700	M2DD	A	600	APF,APFR,APLC	AN	N	Y	N	N	N	10	0	0	84-7-10	0	Y	N
5MT8539	687260	4149180	M2DD	A	600	APLC,APF	PR	Y	Y	N	N	N	8	0	0	84-7-11	0	Y	N
5MT8541	687030	4150130	M2DD	S	110	APF	PR	N	Y	N	N	N	1	0	0	84-7-B	0	?	N
5MT8542	687200	4150640	M2DD	B	500	APFR	PR	N	Y	N	N	N	1	0	0	84-7-C	0	?	N
5MT8543	687100	4150540	M2DD	S	700	HTF	P2E	N	Y	N	N	N	2	0	0	84-7-D	0	Y	N
5MT8544	687270	4150820	M2DD	S	400	APF	AN	N	Y	N	N	N	0	0	0	84-7-E	0	N	N
5MT8545	686610	4149090	ROB	A	300	A	AN	N	N	N	N	N	3	0	0	84-12-9	0	?	N
5MT8546	687000	4149740	ROB	T	460	HPS	P2E	N	Y	N	N	N	2	0	1	84-12-9A	0	Y	N
5MT8547	686800	4149340	M2DD	S	40	APF,APLC	P2	N	N	N	N	N	4	0	0	84-12-10	0	?	N
5MT8548	687040	4149780	ROB	T	430	APF	B3	N	Y	N	N	N	2	0	0	84-12-10A	0	?	N
5MT8549	686910	4149370	ROC	S	225	APF	AN	N	Y	N	N	N	1	0	0	84-12-11	0	?	N
5MT8550	685300	4148160	M2DD	S	250	APLC,APV	P2	N	N	N	N	N	0	0	0	84-14-19	0	N	N
5MT8551	685130	4148040	M2CE	S	300	HT	P3E	N	N	N	Y	Y	1	0	0	84-14-20	0	Y	N
5MT8552A	685030	4148010	M2DD	S	400	HT	B3	N	N	N	N	Y	0	0	0	84-14-21	0	Y	N
5MT8552B	685030	4148010	M2DD	S	400	HT	P3	N	N	N	N	Y	0	0	0	84-14-21	0	Y	N
5MT8553A	685040	4147900	M2C	A	430	APF,APFR,APLC	ANE	N	N	N	N	N	3	0	0	84-14-22	0	Y	N
5MT8553B	685040	4147900	M2C	A	430	APF,APFR,APLC	ANL	N	N	N	N	N	2	0	0	84-14-22	0	Y	N
5MT8554	685060	4147950	M2C	S	400	HPM	P3L	Y	N	N	N	N	3	1	2	84-14-23	0	Y	N
5MT8555	685410	4148100	M2CE	S	100	APLC,ASFG?	P2	N	N	N	N	Y	0	0	0	84-14-24	0	?	N
5MT8556	685110	4147950	M2C	T	300	HT	P3	N	N	N	N	N	3	0	0	84-14-25	0	?	N
5MT8557	685030	4147790	M2C	S	500	HPM	B3	N	N	N	N	N	13	2	3	84-14-26	0	Y	Y
5MT8558	684950	4147790	M2CE	S	500	ASFG,APV	P3	N	N	N	Y	Y	0	0	0	84-14-27	0	Y	N
5MT8559	685200	4147900	M2C	S	280	A	PR	N	N	N	N	N	0	0	0	84-14-28	0	?	N
5MT8560	685300	4147940	M2C	T	130	HPS	B3	N	N	N	N	N	4	0	1	84-14-29	0	Y	N
5MT8561	685410	4147980	M2CE	S	50	ASFG	P3	N	N	N	N	Y	0	0	0	84-14-30	0	Y	N
5MT8562	684130	4147530	M2DD	S	1,100	HTF	P2L	N	Y	N	N	N	4	0	0	84-14-31	0	Y	N
5MT8563A	684500	4147580	M2DD	S	1,000	APF,APLC	B3	N	Y	N	N	N	4	0	0	84-14-32	0	Y	N
5MT8563B	684500	4147580	M2DD	S	1,000	APFK	ANL	N	Y	N	N	N	2	0	0	84-14-32	0	Y	N
5MT8564	684450	4147660	ROD	S	100	APF,APLC	AN	N	Y	N	N	N	1	0	0	84-14-33	0	N	N
5MT8565A	684800	4147550	M2DD	T	800	HPS	B3	N	N	N	N	N	2	1	1	84-14-34	0	Y	Y
5MT8565B	684800	4147550	M2DD	T	800	HPS	P2E	N	N	N	N	N	2	1	1	84-14-34	0	Y	Y

SITE NUMBER	UTM ME	SOIL	LANDF	SPRG	SITE TYPE	TIME PERIOD	PTD	CHND	STAB	PET	RCKST	#RC	DEP	HSED	TEMP#	TWR	ELG	EXC
5MT8566A	684870 4147630	M2CE	S,B	680	APF	AN	N	N	N	N	N	1	0	0	84-14-35	0	Y	N
5MT8566B	684870 4147630	M2CE	S	680	APLC	ARM	N	N	N	N	N	1	0	0	84-14-35	0	Y	N
5MT8567	684950 4147700	M2C	T	560	APF	ANE	N	N	N	N	N	3	0	0	84-14-36	0	Y	N
5MT8568	685190 4147770	M2CE	S	350	APF	ANL	N	N	N	N	N	1	0	0	84-14-37	0	N	N
5MT8569	687140 4148570	M2DD	A	900	APLC,APF	AN	N	N	N	N	N	1	0	0	84-17-1	0	?	N
5MT8570	687150 4148950	M2DD	A	600	APF,APV	AN	N	N	N	N	N	5	0	0	84-18-1	0	Y	N
5MT8571	684000 4147180	M2DD	S	1,000	APFK	ANL	N	Y	N	N	N	2	0	0	84-23-1	0	Y	N
5MT8572	684110 4147360	M2DD	S	1,100	APFK	ANL	N	Y	N	N	N	1	0	0	84-23-2	0	Y	N
5MT8573	684110 4147140	M2DD	T	900	APF,APLC	PR	N	Y	N	N	N	2	0	0	84-23-3	0	?	N
5MT8574	684170 4147270	M2DD	T	950	APF,APLC	ANL	N	Y	N	N	N	5	0	0	84-23-4	0	?	N
5MT8575	683810 4147070	M2DD	S	1,100	APFK	P3	N	Y	N	N	N	1	0	0	84-23-5	0	Y	N
5MT8576	683720 4147050	M2DD	S	1,250	APF	PR	N	Y	N	N	N	1	0	0	84-23-6	0	?	N
5MT8577	683770 4146930	M2DD	T	1,150	APF,APLC	P3	N	Y	N	N	N	4	0	0	84-23-7	0	Y	N
5MT8578	684300 4147290	M2DD	S	980	HT	P3E	N	N	N	N	N	0	0	0	84-23-8	0	Y	N
5MT8579	684460 4147290	M2DD	S	750	HT	ANL	N	N	N	N	Y	0	0	0	84-23-9	0	?	N
5MT8580	684680 4147340	M2DD	S	700	HT	ANL	N	N	N	Y	Y	0	0	0	84-23-10	0	Y	N
5MT8581	684560 4147200	M2DD	S	650	HPS	P3E	N	N	N	N	N	0	0	1	84-23-11	0	Y	N
5MT8582	684740 4147140	M2C	A	500	APF,APFR	ANL	N	N	N	N	N	4	0	0	84-23-12	0	Y	N
5MT8583	684920 4147230	M2CE	S	560	HT	P2L	N	N	N	N	N	0	0	0	84-23-13	0	?	N
5MT8584A	684860 4147130	M2CE	B	500	HT	B3	N	N	N	N	N	1	0	0	84-23-14	0	?	N
5MT8584B	684860 4147130	M2CE	B	500	APFK	ANL	N	N	N	N	N	1	0	0	84-23-14	0	?	N
5MT8774A	686080 4147120	M2C	S	800	HPM	P2L	Y	N	N	N	N	0	4	6	UNREC	2	Y	N
5MT8774B	686080 4147120	M2C	S	800	HPM	P3E	Y	N	N	N	N	0	4	6	UNREC	2	Y	N
5MT8774C	686080 4147120	M2C	S	800	HPM	P3L	Y	N	N	N	N	0	4	6	UNREC	2	Y	N

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